

US EPA ARCHIVE DOCUMENT

DATE OUT: 12 Apr 2006

SUBJECT: **PRODUCT CHEMISTRY REVIEW**      MP [ ] EP [X]  
DP BARCODE No.: D324414  
Reg. File Symbol No.: 62719-LUE  
PRODUCT NAME: Dimension 2EW  
COMPANY: Dow AgroSciences LLC  
Decision No.: 362474      PC CODE: 128994  
FOOD USE: [ ]      Integrated Formulation [ ]

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*Bruce F. Kitchens*  
*12 Apr 2006*

TO: RM#23, Joanne Miller/Eugene Wilson  
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*SM*  
*4/12/06*

**INTRODUCTION:**

The registrant, Dow AgroSciences LLC, is submitting an application for the registration of the new end-use product, Dimension 2EW. The active ingredient in this product is Dithiopyr (91% a.i.) at a label nominal concentration of 24.0% a.i. This product is intended for use as an herbicide. In support of this request, the registrant has submitted a basic Confidential Statement of Formula (CSF) dated 17 Mar 2005, a draft label, and product chemistry data contained in MRID#s 466928-01 and 466928-02. The Technical Review Branch (TRB) has been asked to review this submission.

**SUMMARY OF FINDINGS**

TRB has reviewed this submission and reports the following findings:

1. This product is produced from a registered source of the active ingredient.
2. All inert ingredients are cleared for use in formulated pesticide products.
3. The nominal concentration of the active ingredient listed on the proposed CSF and the draft label are the same.
4. The draft label contains the appropriate storage and disposal statements.
5. The active ingredient's certified limits as proposed on the basic CSF are acceptable.

**CONCLUSIONS:**

TRB has reviewed this submission and concludes the following:

1. The basic formula CSF for the proposed end-use product, Dimension 2EW dated 17 Mar 2005 is acceptable.
2. This submission satisfies the data requirements as specified in 40 CFR 158.155, 158.160, 158.165, 158.167, 158.175, and 158.180 with respect to product identity and composition, description of materials used to produce the product, description of formulation process, discussion of formation of impurities, certified limits, and enforcement analytical method.
3. This submission satisfies the data requirements as specified in 40 CFR 158.190 with respect to physical and chemical properties. The data requirements for storage stability and corrosion characteristics are not satisfied. Inform the registrant that one-year studies are required to satisfy these data requirements. The value listed on the CSF for density is not the same as the value listed in the data report (MRID# 466928-02). Inform the registrant that this discrepancy needs to be corrected.

**PRODUCT CHEMISTRY DATA (SERIES 830 Subgroup A)**

<u>Subgroup A – Product Identity and Composition</u>	<u>Data Required Fulfilled</u>	<u>MRID No.</u>
830.1550. Chemical Identity	Y	466928-01
830.1600. Beginning Materials	Y	466928-01
830.1650. Formulation Process	Y	466928-01
830.1670. Discussion of Impurities	Y	466928-01
830.1700. Preliminary Analysis	NR	
830.1750. Certified Limits	Y	466928-01
830.1800. Enforcement Analytical Method	Y	466928-01

PRODUCT CHEMISTRY DATA (SERIES 830 Subgroup B)

Subgroup B – Physical and Chemical Properties	<u>Data Required Fulfilled</u>	<u>Value or Qualitat. Descrip.</u>	<u>MRID No.</u>
830.6302. Color	NR		
830.6303. Physical State	Y	Liquid	466928-02
830.6304. Odor	NR		
830.6314. Oxidation/Reduction Action	Y	No reaction when mixed with potassium permanganate, monoammonium phosphate, Zn, water	466928-02
830.6315. Flammability	Y	>100°C	466928-02
830.6316. Explodability	Y	Product does not contain explosive components	
830.6317. Storage stability	N		
830.6319. Miscibility	NA	Product not mixed with petroleum solvents	
830.6320. Corrosion Characteristics	N		
830.6321. Dielectric Breakdown Voltage	NA	Product not used around electrical equipment	
830.7000. pH	Y	4.57	466928-02
830.7100. Viscosity	Y	34 mPa s @ 20°C 15.7 mPa s @ 40°C	466928-02
830.7000. Density/Bulk Density	Y	1.001 g/ml	466928-02

Explanations: A = 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.

**Enforcement Analytical Method: (MRID No. 466928-01)**

The active ingredient content of Dithiopyr was determined by gas chromatography (GC) using flame ionization detection (FID) and an internal standard calibration by analytical method DAS-AM-05-005. The method was validated for performance by determining its recovery, precision, linearity and validation ranges.

**Equipment and Parameters**

Instrument:	Agilent 6890 Gas Chromatograph System (GC)
Detector:	Flame Ionization Detector (FID)
Detector Temp.:	300°C
Injector Temp.:	220°C
Data System:	HP Chemstation software
Column:	DB-1701, 30 m x 0.32 mm x 1.0µm
Temperature program:	100°C for 2 minutes, 15°C/min to 260°C, hold 10 min.
Sample Size:	1.0 µl
Carrier Gas:	Nitrogen
Gas Flows:	Hydrogen - 30 ml/min Air - 300 ml/min Make-up (N <sub>2</sub> ) - 20 ml/min
Flow Rate:	1.2 ml/min, split ratio 25:1
Retention Time:	Dithiopyr – 16 min. Tetracosane – 20 min.