

US EPA ARCHIVE DOCUMENT

DATE OUT: 24 Jan 200

SUBJECT: **PRODUCT CHEMISTRY REVIEW** MP [ ] EP [ x ]  
DP BARCODE No.: D332132  
Reg. File Symbol No.: 62719-LA  
PRODUCT NAME: GF-1674  
COMPANY: Dow AgroSciences LLC  
Decision No.: 369827 PC CODE: 108702  
FOOD USE: [ x ] Integrated Formulation [ ]

FROM: Bruce F. Kitchens, Chemist  
Technical Review Branch  
Registration Division (7505P)

*Bruce F. Kitchens 1/24/07*  
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TO: RM #23, Joanne Miller/James Stone  
Herbicide Branch (7505P)  
Registration Division (7505P)

### INTRODUCTION:

The registrant, Dow AgroSciences, is submitting an application to register the proposed end-use product, GF-1674. In addition, the registrant is seeking a NAFTA review for the proposed active ingredient in the United States, Canada, and Australia. The active ingredient in this product is Pyroxsulam (99.0% a.i.) at a label nominal concentration of 2.87% 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 July 2006, a draft label, and product chemistry data contained in MRID#s 469083-02, 469083-04, and 469085-15. 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. In addition, all inert ingredients are exempt from the requirement of a food tolerance.
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, GF-1674 dated 17 July 2006 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. 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.
3. This submission satisfies the data requirements as specified in 40 CFR 158.190 with respect to physical and chemical properties.

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

Subgroup A – Product Identity and Composition	<u>Data Required Fulfilled</u>	<u>MRID No.</u>
830.1550. Chemical Identity	Y	469083-02
830.1600. Beginning Materials	Y	469083-02
830.1650. Formulation Process	Y	469083-02
830.1670. Discussion of Impurities	Y	469083-02
830.1700. Preliminary Analysis	NA	
830.1750. Certified Limits	Y	468083-02
830.1800. Enforcement Analytical Method	Y	469083-02

PRODUCT CHEMISTRY DATA (SERIES 830 Subgroup B)

Subgroup B – Physical and Chemical Properties	Data Required Fulfilled	Value or Qualitat. Descrip.	MRID No.
830.6302. Color	Y	Opaque brown	469083-04
830.6303. Physical State	Y	Liquid	469083-04
830.6304. Odor	Y	Mild	469083-04
830.6314. Oxidation/Reduction Action	Y	No temperature change when mixed with water, zinc, potassium permanganate, & monoammonium phosphate	469083-04
830.6315. Flammability	Y	96.1°C (flash point)	469083-04
830.6316. Explodability	Y	No exothermic events of temp. range (DSC)	469083-04
830.6317. Storage stability	N		
830.6319. Miscibility	NA	Product not an EC not diluted with petroleum solvents	
830.6320. Corrosion Characteristics	N		
830.6321. Dielectric Breakdown Voltage	NA	Product not used around electrical equipment	
830.7000. pH	Y	pH (neat) 5.13 pH (1% w/v) 6.21	469083-04
830.7100. Viscosity	Y	79.13 mPa.s @ 20C (50(1/s)) 34.53 mPa.s @ 40C	469083-04
830.7000. Density/Bulk Density	Y	Relative: 1.0421	469083-04

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. 469083-02)**

The active ingredient, Pyroxsulam and cloquintocet-methyl, were determined by high performance liquid chromatography (HPLC) using UV detection and an internal standard by analytical method DAS-AM-05-032. Method was validated for mean recovery, method precision, linearity and validation ranges of the active ingredient, Pyroxsulam (XDE-742).

**Equipment and Parameters**

Instrument: Agilent 1100 High Pressure Liquid Chromatograph (HPLC)  
Detector: Ultraviolet detector (UV)  
Wavelength: 280 nm  
Column: Phenomenex Luna C8, 150 mm x 4.6mm i.d., 3 µm particle size  
Column Temperature: Ambient  
Sample Size: 10 µl  
Mobile Phase: Water/Acetonitrile

<u>Time</u>	<u>% Water (0.1% H<sub>3</sub>PO<sub>4</sub>)</u>	<u>%ACN (0.1% H<sub>3</sub>PO<sub>4</sub>)</u>
0	65	35
5	65	35
20	15	85
22	15	85

Flow Rate: 1.5 ml/min  
Retention Time:  
XDE-742 – 6.7 min.  
CQC-methyl – 14.9 min.