

3-23-94

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REG. NO: 059639-IE

Submission: S447044

FILE SYMBOL: D194627

PRODUCT CHEMISTRY REVIEW FOR END USE PRODUCTS

PRODUCT NAME: Resource Herbicide S23031 10EC

Company: Valent USA Corporation

TO: 23 Joanne Miller/Daniel Kenny

FROM: Shyam B. Mathur, Chemist

Shyam B. Mathur 3/23/94

THRU: Harold Podall, Section Head

H. Podall 3/23/94

CHEMICAL: 128724 Flumiclorac Pentyl Technical

MRID NOS. 421874-02, 421874-03, 421874-04 and 421698-01

Food Use(X)

Non Food Use ()

Inerts cleared: c () d () e () yes (X) no ()

Inerts List 1 () Other ()

INERT INGREDIENT INFORMATION IS NOT INCLUDED

NOTE: Only [redacted] and [redacted] are exempt from Tolerances according to 40CFR§180.1001

Please provide the requested information for the following checked items:

- 1. Submit the specific chemistry data for your product.
 - If submitted earlier, provide MRID Number(s).
- 2. Your product is not sufficiently similar to the product you referenced.
- 3. In reference to the Confidential Statement of Formula (CSF), please provide the following information of your product:
 - a) pH of a specified water dilution. 5.0 at 20°C
 - b) Density 0.968 g/ml at 20°C (CSF dated 05/25/93)

INERT INGREDIENT INFORMATION IS NOT INCLUDED

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- c) The upper and lower certified limits based on the pure active ingredients rather than the technical or concentrate.

NOTE:

d) The upper and lower certified limits of the individually added inerts.

- e) The Registrant uses an AI Flumiclorac Pentyl Tech. (EPA REG. No. 059639-IR) which is in the Process of Registration with the Agency, for the formulation of this end use product. It should be noted that End use product can not be Registered till the AI Technical is Registered with the Agency.

4. Based on the current CSF (dated,), your product will not meet the label claim for the active ingredient. Please revise the label or the CSF so that the information agrees.

Provide the chemical identify of all components, the percentage composition, CAS Registry Numbers, and Material Safety Data Sheet (two copies) for the following compounds:

6. In the proposed labeling, provide the following information:

- a) Update the label Storage and Pesticide and Container Disposal Statements in accordance with PR Notice 84-1 for non-aerosol containers for houses and institutional uses of PR Notice 83-3 for all other uses.
- b) Add the heading to the label per 40CFR§172-6(a)1.
- c) Under the heading PHYSICAL OR CHEMICAL HAZARDS, list the product as Flammable according to 40CFR§156.10(h)2(iii) and add the following warning.

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- d) If the solvent has insecticidal activity provide the EPA Registration Number, if does not it should be removed from the active ingredient statement and added to the total percentage of the inert ingredients.
- e) Add a footnote to the inert ingredients indicating: Contains petroleum distillates, xylene or xylene-range aromatic solvent.
- f) Since your data matrix does not provide a dielectrical breakdown voltage, you must add the following statement to the physical or Chemical Hazards heading;

Do not use this product in or on electrical equipment due to the possibility of shock hazard.

- g) The terms active ingredient(s) and inert ingredients should be in the same type size, be aligned to the same margin and be equally prominent.

7. In reference to the product specific data requirements, provide the following information:

- a) Statement of Composition: A complete description of the manufacturing formulation process. Describe equipment used, mixing time, temperature, pressure, etc. The Registrant described the full formulation process. See the Attachment-1. (MRID No. 421874-02)

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- b) Discussion of Formation of Unintentional Ingredients: The Registrant provided information on this topic See the Attachment-1 (MRID No. 421874-02)
- c) Certification of Limits: Upper and lower limits or each active and individually added inert component. The Registrant submitted a CSF dated May 25, 1993. See the comments in 3(e).
- d) Analytical Method: Provide the methods used to analyze for the active ingredients or a full reference for a published method or MRID Number(s). The Registrant submitted data on Series 62. See Attachment-2 (MRID No. 421874-03 and 421874-04)

Series 63. Physical & Chemical Characteristics: (MRID No. 421698-01)

- e) Color: In common terms: Medium brown (Munsell 10R 3/8)
- f) Physical State: liquid at 20°C
- g) Odor: Characteristic Kerosene odor
- h) Density/Sp. Gravity: 0.968 g/ml at 20°C
- i) pH: 5.0 at 20°C.
- j) Oxidizing or Reducing Action:
This data needs further investigation on the part of the Registrant.
- k) Explodability: NA. The test material does not contain any known explosive components.
- l) Viscosity: 10.6 Centipose at 30.0 rpm; 14.1 Centipose at 60.0 rpm at 25.1°C (this was determined using the Brookfield Viscometer)
- m) Miscibility: Registrant reported that it is not to be diluted with petroleum solvent.
- n) Corrosion Characteristics: The Registrant reported that the test substance is not corrosive to containers for one year at ambient temperature.

- [] o) Dielectric Breakdown Voltage: 1.8 kV at 24°C
 - [] p) Storage Stability: The Registrant stated that the test substance is stable for one year at room temperature.
 - [] q) Flammability: The Registrant determined the flash point of the test substance to be 154°F(68°C) by Pensky-Martins Closed Cup Method.
8. [] The following is the regulatory status of the inert ingredients under 40CFR 180.1001 for the exemption of the requirement of a tolerance.

9. Other

Note to PM: Inter-office use only **INERT INGREDIENT INFORMATION IS NOT INCLUDED**

- (1). PM please note comments in 3(e).
- (2). Only [redacted] and [redacted] are exempt from Tolerances according to 40CFR§180.1001

Please notify the Registrant :

-DK

- (1). To put EPA Reg. No. [in Block No. 12] for the AI Flumiclorac Pentyl Tech. in the CSF submitted on 05/25/93.
- (2). To explain the reaction of the test substance with water and with Potassium permanganate. In both the cases the temperature rose between 9°C to 11°C and also change in color was observed in case of water treatment. If some by-products are formed they should be identified and estimated. (Tj)

SUMMARY ATTACHED

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TABLE 1: SUMMARY OF PRODUCT CHEMISTRY DATA REQUIREMENTS

GLR #	TITLES	
Series 61-Product Identity and Composition (40CFR158.155, 160, 162, 165 & 167)		
61-1	Product Identity & Disclosure of Ingredients	A
61-2	Description of Starting Materials & Manufacturing Process	A
61-3	Discussion of Formation of Impurities	A
Series 62-Analysis and Certification of Product Ingredients (40CFR158.170, 175 & 180)		
62-1	Preliminary Analysis of Product Samples	NA
62-2	Certification of Ingredient Limits (CSF)	A
62-3	Analytical Methods to Verify Certified Limits	A
Series 63-Physical and Chemical Characteristics (40CFR158.190)		
63-2	Color	A
63-3	Physical State	A
63-4	Odor	A
63-5	Melting Point	NA
63-6	Boiling Point	NA
63-7	Density, Bulk Density, or Specific Gravity	A
63-8	Solubility	NA
63-9	Vapor Pressure	NA
63-10	Dissociation Constant	NA
63-11	Octanol/Water Partition Coefficient	NA
63-12	pH	A
63-13	Stability	NA

63-14	Oxidizing Or Reducing Action	UG
63-15	Flammability	A
63-16	Explodability	NA
63-17	Storage stability	A
63-18	Viscosity	A
63-19	Miscibility	A
63-20	Corrosion Characteristics	A
3-21	Dielectric Breakdown Voltage	A

A - Acceptable

Reviewer _____

W - Waived

NA - Not Applicable

Section Head _____

DG - Data Gap

UG - Up grade

Date: _____

ATTACHMENT-1

CONFIDENTIAL

DPBARCODE: D194627 SUBMISSION S447044 REG. No. 59639-IE CHEMICAL
128724 Flumiclorac Pentyl Technical PRODUCT Resource Herbicide 10EC
COMPANY Valent USA Corporation.

61-1. Product Identity & Disclosure of Ingredients:
(MRID No. 421874-02)

Information on Active Ingredient:

Common Name: Flumiclorac Pentyl Technical

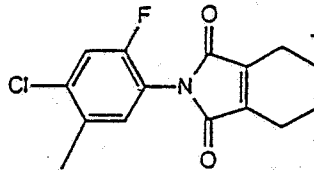
CA Name : Pentyl [2-chloro-4-fluoro-5-(3,4,5,6-tetrahydrophthalimido)phenoxy acetate(95.3%).

CAS Number : 87546-18-7

Molecular formula: $C_{21}H_{23}ClFNO_5$

Molecular weight : 423.85

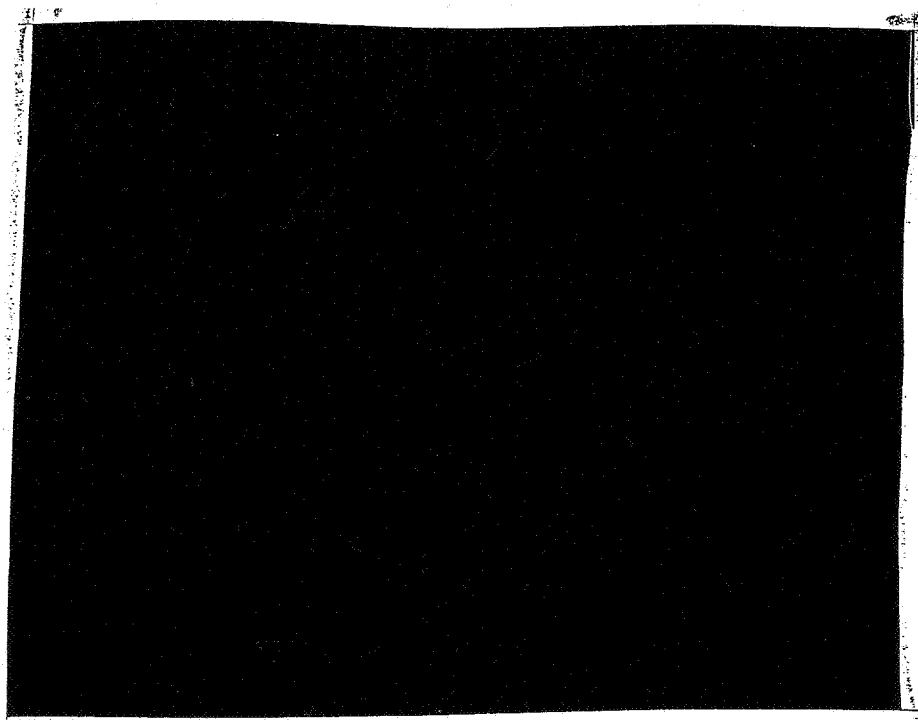
Structuarl Formula:



$OCH_2CO_2C_5H_{11}(n)$

S-23031

The Registrant submitted the following CSF dated 05/25/93:



PRODUCT CONFIDENTIAL STATEMENT
OF FORMULA IS NOT INCLUDED

ATTACHMENT-1

CONFIDENTIAL

DPBARCODE: D194627 SUBMISSION S447044 REG. No. 59639-IE CHEMICAL 128724 Flumiclorac Pentyl Technical PRODUCT Resource Herbicide 10EC COMPANY Valent USA Corporation.

61-2. Description of beginning materials & Manufacturing Process:
(MRID No. 421874-02)

The Registrant submitted the required information on the beginning materials for the formulation of this product. The beginning materials are:

S-23031(AI);

MSDS for these materials were attached.

Manufacturing Process:

According to the Registrant the product is produced by the batch process & does not involve any chemical reaction. The general procedure is described below:

3. Discussion of the formation of Impurities:
(MRID No. 421874-02)

The Registrant provided following information on this topic:

According to the Registrant no chemical reactions occur during the manufacturing process of this product(S-23031 10EC) and no post production chemical reactions occur.

MANUFACTURING PROCESS INFORMATION IS NOT INCLUDED

ATTACHMENT-2

DPBARCODE: D194627 SUBMISSION S447044 REG. No. 59639-IE CHEMICAL
128724 Flumiclorac Pentyl Technical PRODUCT Resource Herbicide 10EC
COMPANY Valent USA Corporation.

Series 62. Analytical Methods: (MRID No. 421874-04)

The Registrant provided following information on this topic:

The content of S-23031(AI) in S-23031 10EC was determined by reversed phase liquid chromatography using p-benzylidiphenyl as an internal standard. This method was validated by studies of the precision and accuracy.



QUALITY CONTROL PROCEDURE INFORMATION IS NOT INCLUDED