

☞ **09hr_ab0314_AC-NR_pt02**



Details:

(FORM UPDATED: 08/11/2010)

**WISCONSIN STATE LEGISLATURE ...
PUBLIC HEARING - COMMITTEE RECORDS**

2009-10

(session year)

Assembly

(Assembly, Senate or Joint)

**Committee on ... Natural Resources
(AC-NR)**

COMMITTEE NOTICES ...

- Committee Reports ... **CR**
- Executive Sessions ... **ES**
- Public Hearings ... **PH**
- Record of Comm. Proceedings ... **RCP**

INFORMATION COLLECTED BY COMMITTEE FOR AND AGAINST PROPOSAL

- Appointments ... **Appt**
- Clearinghouse Rules ... **CRule**
- Hearing Records ... bills and resolutions
(**ab** = Assembly Bill) (**ar** = Assembly Resolution) (**ajr** = Assembly Joint Resolution)
(**sb** = Senate Bill) (**sr** = Senate Resolution) (**sjr** = Senate Joint Resolution)
- Miscellaneous ... **Misc**

* Contents organized for archiving by: Mike Barman (LRB) (Sept/2010)

Wisconsin Railroad Committee

119 Martin Luther King Jr. Blvd. , Suite LL6
Madison, WI 53703
Phone: (608) 251-6394
Fax: (608) 251-3394
gratz@samgratz.net

BNSF Railway
CN Railway
Canadian Pacific
Union Pacific

Date ?

Wisconsin's Class I Railroads and **AB-314**

The Wisconsin Class I railroads appreciate the response indicated by the Substitute Amendment to AB-314. In its original form, the bill causes great problems for the Wisconsin railroad companies. The original bill duplicates and conflicts with existing federal environmental regulations and compromises certain homeland security policies. Enactment of AB-314 would also lead to disruptions of rail service to Wisconsin businesses and lead to more blocked highway/rail crossings. The most onerous provisions of the original AB-314 have been changed or eliminated in the Substitute Amendment. It does, however, still leave a requirement to make public certain information that railroad policy currently keeps privileged as a security measure. In addition, as explained later in this memo, the essential topics contained in this bill are covered under extensive federal regulation by the EPA and the FRA (Federal Railroad Administration) among others. In these instances, federal law supercedes state action.

The following points will be made and explained:

- **The original AB-314 allows crews to refuse to work for 24 hours which directly conflicts with current EPA product label language and re-entry regulations**
- **Railroads already follow extensive federal regulation**
- **Railroad pesticide applicators are currently licensed**
- **The proposal would compromise security**
- **Railroads already notify crews in the workplace of pesticide applications as required under federal law**

Introduction

To maintain safe working and operating conditions for workers and trains, railroads utilize a variety of approaches and tools to manage unwanted vegetation including the use of herbicides. The Environmental Protection Agency (EPA) federally registers all herbicides that railroads use and all railroads already follow federal regulations regarding herbicide application. As well, all railroads have comprehensive safety management systems in place to ensure compliance with applicable Federal Railroad Administration (FRA), Occupational Health and Safety Administration (OHSA) and other federal standards directly or indirectly applicable to the protection of workers.

It is not at all clear what situation brings this proposal to the Natural Resources Committee. The content of this proposed bill fails to acknowledge the broad scope of existing federal regulations and railroad safety management systems that are already in place.

The following provides some general background information on contemporary railroad vegetation management programs, identifies areas where existing procedures already meet the requirements in the proposed bill and includes a critique of some aspects of the bill that are completely unworkable.

Railroad Vegetation Programs & Management Tools

The sole purpose of vegetation management in a railroad context is safety: safety of railroad employees, safety of the public and safety of the environment. Railroad vegetation management programs have an important role in the prevention of employee injuries in active work areas and reducing the potential and frequency of derailments and road crossing accidents and their associated impacts on employees, members of the public and the environment.

Weed growth in the ballast (rock section underlying the track structure) can:

- impede drainage, affect track geometry and promote track instability
- impede safety inspections and operation of maintenance equipment
- obstruct visibility of other hazards (e.g. rock falls on to tracks)
- increase the risk of fire
- create a variety of slipping / tripping hazards for employees involved in switching rail cars

Brush and tall weeds on railroad rights-of-way and at railroad support facilities can:

- impede railroad signal and road / rail crossing sightlines
- impede the operation of pole lines used for electrical distribution and communication systems and operations of other Signals & Communication infrastructure
- create fire and other risks at railroad electrical facilities and bulk fuel storage areas

To maintain safe operating conditions railroads utilize a variety of approaches and tools to manage unwanted vegetation including the use of targeted herbicide applications. Herbicides are a sub-class of pesticides used to control unwanted vegetation. Herbicides are designed to work on organisms that rely on photosynthesis which are mechanisms not found in most other organisms such as mammals / humans. As a result, herbicides as a class are inherently safe. Furthermore, all herbicides that railroads routinely use have a low acute mammalian toxicity, are not “exotic” and are often identical to formulations used ubiquitously in and around food crops in agriculture. Due to the inherently low toxicity of these products some of the most common herbicides labeled for railroad use such as glyphosate (Roundup) and 2,4-D are also readily available to any homeowner without any special training or permits at virtually any local hardware or gardening store in Wisconsin.

Railroads' Issues with AB-314

AB-314 allows crews to refuse to work for 24 hours in an area that had been sprayed. This directly conflicts with current EPA product label language and re-entry regulations, which the railroads already follow regarding pesticides use. This 24-hour rule could shut down railroad operations for many hours, backing up trains, disrupting service to Wisconsin rail customers and result in the blocking of many highway/rail crossings. [Because of the potential disruption to rail operations, it is likely that Interstate Commerce Commission Termination Act (ICCTA) and the precedent set by the decisions of the federal Surface Transportation Board preempt this provision.]

Railroads already follow extensive federal regulation regarding herbicide application. Federal regulations supercede what is proposed in this legislation. Railroads and their contractors currently follow regulation of pesticide applications by federal agencies including Occupational Health and Safety Administration (OSHA) and the Environmental Protection Agency (EPA) that regulates pesticide applications.

Railroad pesticide applicators are currently licensed and follow product labeling under FIFRA (Federal Insecticide Fungicide Rodenticide Act) that gives the EPA the responsibility to regulate pesticide labels that cover re-entry, worker protection standards and how the product will be used. FIFRA also prohibits states from imposing any requirements that are inconsistent with FIFRA labeling or packaging requirements, even if the state requirements are not labeling or packaging requirements per se. 7 U.S.C. § 136v(b). In addition, the provision in AB 314 requiring DATCAP to set standards regarding conditions for railroad pesticide application is a duplication of federal law. The EPA has already set such standards, has included them on the required product labeling, and licensed applicators are required to follow the proscribed application.

A solution in search of a problem - It is not at all clear what situation brings this proposal to the Natural Resources Committee. This proposal singles out railroads for an extra layer of regulation, often conflicting with rules already in place. This bill would add an extra burden on railroads, when there is no demonstrated problem specific to Wisconsin railroad practices. Nothing in this proposed legislation can offer protections beyond those currently addressed in federal law.

Compromises Security - The "make available" provision in AB 314 requiring railroads to provide adjacent landowners with information regarding the treatment of railroad rights-of-way directly conflicts with post-9/11 federal Homeland Security measures directed at preventing public release of certain sensitive information. Because of these federal security measures, railroads currently do not make public the timing and locations of pesticide applications.

Railroads already notify crews in the workplace of pesticide applications as required under federal law. The bill's requirement that notification language be in 'easily comprehensible language' may seem reasonable at a glance, but the label instructions are set by federal standard. The technical language is required to describe the products and their method of use. Any 'simplification' of language as proposed by AB 314 could be construed as an attempt to provide less than full disclosure.

The March 15 date for filing with DATCAP would be a significant problem for some railroads. Some plan the season that far ahead, others do not. In any case, weather affects the growing season and application plans can change dramatically. A specific plan filed by March 15 could be useless by mid-summer or even sooner.

Federal Regulations regarding Vegetation Management on Railroads Preempt State Attempts at More Stringent Control

Railroad vegetation management is regulated under 49 CFR §213.37 Vegetation.

49 CFR §213.2 Preemptive effect.

"Under 49 U.S.C. 20106, issuance of these regulations preempts any State law, regulation, or order covering the same subject matter, except an additional or more stringent law, regulation, or order that is necessary to eliminate or reduce an essentially local safety hazard; is not incompatible with a law, regulation, or order of the United States Government; and that does not impose an unreasonable burden on interstate commerce."

There is no demonstrated necessity to add to the regulation and penalties already prescribed by federal law. Existing federal jurisdiction provides remedy for expressed employee concerns as well as any that might come from the railroads' local communities and neighbors.

Represented by Samuel O. Gratz





**Brotherhood of Maintenance
of Way Employees Division**
of the International Brotherhood of Teamsters

Michael J. Kozlars
Wisconsin Legislative
Director

909 Eastwood Street • Holmen, WI 54636
608-317-9755 • bmwedteamsters@adlmail.com

Brotherhood of Locomotive Engineers and Trainmen
Wisconsin State Legislative Board



Anthony M. Dimond
Engineer
Chairman

E 9775 Buckhorn Rd. • Reedsburg, WI 53959
office / fax (608) 415-6020 • cell (608) 448-8175
E-mail tdjcts@email.msn.com



AB 314

Date ?



Brotherhood of Maintenance of Way Employees Division of the International Brotherhood of Teamsters

Freddie N. Simpson
President

Perry K. Geller, Sr.
Secretary-Treasurer

Assembly Bill 314 – Further Remarks

On behalf of the International Brotherhood of Teamsters – Maintenance of Way Employees and Locomotive Engineers and Trainmen, we would like to take this opportunity to respond to some pieces of misinformation that have been disseminated on Assembly Bill 314.

It is our understanding that it has been offered that the Federal Railroad Administration (FRA) rules already protect railroad employees from being exposed to toxic chemicals or other potentially harmful situations. While the FRA has extensive rules on the loading, unloading, storage and transportation of hazardous materials, it does not have specific regulations on the safe use of pesticides or necessary training that employees of the railroad, who may be exposed to these chemicals, must have. It is important that all employees that may be exposed to hazardous chemical “cocktails” should have not only the proper training about these substances, but advanced notice of their application and specific timelines for reentering work areas.

A second point has been brought up about the Federal Employers’ Liability Act (FELA), *45 USC Sec. 51*, in regard to potential expanded negligence when application of the pesticides may be delayed. FELA was enacted by Congress in 1908 to give railroad employees the right, under Federal Law, to recover damages from their employers for injuries occurring at work. The Act provides that the railroad shall be liable to an employee for any injury or death resulting in whole or in part from the negligence of the company, its agents or employees or by reason of any defects or insufficiency due to its negligence in its premises, cars, equipment, etc. The injured worker may bring an action, triable by a jury, in either the State or Federal Courts. Three factors must be present for an injured railroad worker to collect damages against his employer under the FELA. First, the employee must be injured while in the course and scope of his employment. The second requirement is that the railroad must be engaged in interstate commerce and the third requirement is that negligence on the part of the railroad played some part in causing the employee’s injury.

There must be proof of negligence on the part of the railroad which caused or contributed to the employee’s injury. Quite simply, this means that the railroad must exercise reasonable care for the safety of its employees. The railroad must provide its employees with a reasonably safe place to work and a failure to do so is negligence. The railroad’s duty includes the furnishing of reasonably safe tools and equipment; the selection of proper methods to do the work, the furnishing of sufficient help, and the adoption and enforcement of proper procedures.

Michael J. Koziara • Wisconsin State Legislative Director
909 Eastwood Street • Holmen, WI 54636
608-317-9755 • Email mjkoziara@gmail.com

The railroad may also be negligent if it fails to adopt and enforce safe rules and practices and negligence may result from allowing unsafe practices and customs to exist. The fact that such practices and customs are standard in the industry is no defense. If a safer method, custom or practice would reduce or eliminate the risk of injury, it would be negligence to continue an unsafe practice merely because things had been done that way for years.

The injured worker must also use due care for his or her own safety and the failure to do so may result in the finding that the employee was "contributorily" negligent. If the injured employee is found contributorily negligent, then the damages awarded must be reduced by the jury in accordance with the percentage of the employee's negligence or fault. Thus, for example, if the jury were to find the railroad's negligence at 90% and the employee's at 10%, then the amount of the damage verdict for the employee would be reduced by 10%.

It is our understanding that under new interpretations of FELA, any violation of law or company procedure, whether or not the failure to act in accordance with the law is intentional or accidental, the act or failure to act is automatically ruled as negligence by the railroad regardless if it actually causes an illness to an employee.

Taking this into consideration wouldn't the railroad's potential negligence be *lessened*, not increased, by providing proper training and notification to their employees?

It has also been suggested that individual railroad safety procedures and directives would be more than sufficient in protecting railroad employees from possible exposure to hazardous chemicals. The truth is that railroad procedures and directives can, and are, changed quite frequently. The railroads all may have procedures in place that would duplicate the provisions of AB 314 by the end of the month. Their argument would be that the bill is now unnecessary. Two weeks later, a new "version" of the directives are released putting in place the current, extremely lacking, safety rules on this issue.

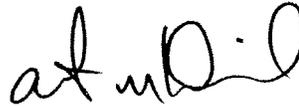
We have met with the lobbyists for the railroads in conjunction with Representative Molepske's staff since the public hearing. We have agreed to significant changes to the original language of the bill to ensure that safety of not only the railroad employees but landowners and the general public as well are ensured without undue burden being placed upon the railroads. It was our understanding that we had achieved a consensus with all parties on August 14, 2009. It is our hope that the railroads understand the need for this legislation and will remove their opposition to the bill as they stated at the end of the August 14th meeting.

Please feel free to contact either one of us if you have any further questions on this bill. We have numerous, first-hand, experiences that we can relate to emphasize the vital need for this legislation. By making some relatively minor additions to state law, you will be protecting the health of thousands of Wisconsin railroad employees.

Sincerely,



Michael Kozlara
Brotherhood of Maintenance
of Way Employees



Anthony Dimond
Brotherhood of Locomotive
Engineers and Trainmen

International Brotherhood of Teamsters



AB 314
?

- 1 - Miller / ~~high~~
- Essig
- Signal region / Treatment
- plant / fuel / oil
- essential d-by water /
not the system
- No preconception
- 1 - Cd water - part
- 2 - Science based
- 3 - ~~water to all~~ ~~concerned parties~~
water input

Preferences

[lyrics](#) [HOME](#) | [NEWS](#) | [ARCHIVES](#) | [CHARTS](#) | [SERVICES](#) | [LINKS](#) | [CONTACT](#)

[A.LYRICS.WEB.SITE](#)



How I Cut Down **5 lbs** of Stomach Fat
Per Week By Obeying this **1 Diet Secret**
[Click Here to Ready My Story](#)

START SEARCHING >>

Browse

[0-9](#) [A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

Peter Tosh Lyrics

"Peter Tosh Till Your Well Runs Dry lyrics"



Send

**"Till Your Well Runs
Dry"**

Ringtone to your Cell

* * *

Customize : Verdana Normal

[Send "Till Your Well Runs Dry" Ringtone to your Cell](#)

You said you love me
And then you left
You broke every promise, oh yes you did
You win every bet
You never miss your water
Till your well runs dry

Tell me, tell me
Whatcha gonna do when your well runs dry?
Whatcha gonna do when your well runs dry?
Whatcha gonna do when your well runs dry?
I'd like to know
Whatcha gonna do when your well runs dry?

Listen to me, darling

You cheat and you lie
 Now you come a running
 Running, wanting second try
 You never miss your water
 Till your well runs dry

Tell me, tell me
 Whatcha gonna do when your well runs dry?
 Whatcha gonna do when your well runs dry?
 Whatcha gonna do when your well runs dry?
 I'd like to know
 Whatcha gonna do when your well runs dry?

Sat down and sighed
 And I heard you packing
 I watched you pass by me
 But you said nothing, not one single word
 But I know you're gonna miss me
 And you're gonna be blue

But tell me, tell me
 Whatcha gonna do when you're feeling blue, Lord?
 Whatcha gonna do, woman, when you're feeling blue?
 Whatcha gonna do when you're feeling so blue?
 I'd like to know
 Whatcha gonna do when you're feeling blue?

(solo)

Tell me, tell me
 Whatcha gonna do when you're feeling blue?
 Whatcha gonna do when you're feeling blue?
 Whatcha gonna do when you're feeling so blue?
 I'd like to know
 Whatcha gonna do when you're feeling blue?

Whatcha gonna do when your well runs dry, woman?
 Whatcha gonna do when your well runs dry?
 Whatcha gonna do when your well runs dry?
 Whatcha gonna do?
 I'd like to know...

 [Send "Till Your Well Runs Dry" Ringtone to your Cell](#) 

E-Mail & IM : <http://www.lyricstime.com/peter-tosh-till-your-well-runs-dry-lyrics.html>
 Websites & Blogs : <http://www.lyricstime.com/peter-tosh-till-your-well-runs-dry-lyrics.html>
 Forums : <http://www.lyricstime.com/peter-tosh-till-your-well-runs-dry-lyrics.html>

Search :

[+ show options](#)

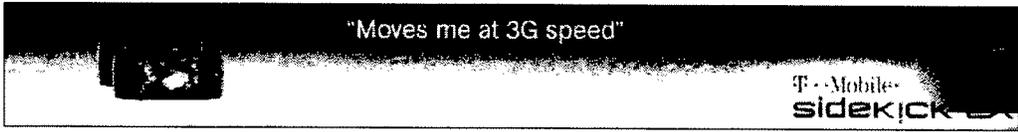
More from this album

Craig David You Don't Miss Your Water ('Til The Well Runs Dry) Lyrics || 213995 lyrics from 16018 bands

SHARE

Browse A B C D E F G H I J K L M N O P Q R S T U V W X Y Z #

band name SEARCH



Song Lyrics » C » Craig David Lyrics » You Don't Miss Your Water ('Til The Well Runs Dry) Lyrics

Craig David You Don't Miss Your Water ('Til The Well Runs Dry) Lyrics Total views : 39 times this week.

You can enlarge you don't miss your water ('til the well runs dry) lyrics for easy viewing, send you don't miss your water ('til the well runs dry) lyrics to your friends or rate the song you don't miss your water ('til the well runs dry) by craig david and help the song become popular. If you have any corrections for You Don't Miss Your Water ('Til The Well Runs Dry) lyrics, please feel free to submit them.

Help us grow
[Submit Lyrics](#)

Send "Craig David" Ringtones to your Cell Phone

Craig David - You Don't Miss Your Water

Play song
 Enlarge font
 Correct lyrics
 Rate song
 Translate lyrics

Add Comment
 Embed lyrics
 Craig David pictures

- Top Rated Artists**
- 01 Linkin Park lyrics
 - 02 Michael Jackson lyrics
 - 03 Drake lyrics
 - 04 Maxwell lyrics
 - 05 Beyonce lyrics
 - 06 Metallica lyrics
 - 07 Kings Of Leon lyrics
 - 08 Taylor Swift lyrics
 - 09 Black Eyed Peas lyrics
 - 10 Boys Like Girls lyrics
 - 11 Hannah Montana lyrics
 - 12 Eminem lyrics
 - 13 Celine Dion lyrics
 - 14 Jordin Sparks lyrics
 - 15 Coldplay lyrics
 - 16 Luis Fonsi lyrics
 - 17 Killers lyrics
 - 18 Daughtry lyrics
 - 19 Brad Paisley lyrics
 - 20 New Boyz lyrics
 - 21 Alexander Rybak lyrics
 - 22 Miley Cyrus lyrics
 - 23 Lenka lyrics
 - 24 Jonas Brothers lyrics
 - 25 Seether lyrics
 - 26 Hoobastank lyrics
 - 27 Muse lyrics
 - 28 Carrie Underwood lyrics
 - 29 Martina McBride lyrics
 - 30 Demi Lovato lyrics

- Top Rated Lyrics**
- 01 New Divide lyrics
 - 02 They Don't Care About Us lyrics
 - 03 Dirty Diana lyrics
 - 04 You Are Not Alone lyrics
 - 05 Man In The Mirror lyrics
 - 06 Thriller lyrics
 - 07 Will You Be There lyrics
 - 08 Smooth Criminal lyrics
 - 09 You Rock My World lyrics
 - 10 Best I Ever Had lyrics
 - 11 Heal The World lyrics
 - 12 Black Or White lyrics
 - 13 Human Nature lyrics
 - 14 Smile lyrics
 - 15 Who Is It lyrics
 - 16 Morphine lyrics
 - 17 Earth Song lyrics
 - 18 Beat It lyrics
 - 19 Pretty Wings lyrics
 - 20 Billie Jean lyrics
 - 21 Ego lyrics
 - 22 Use Somebody lyrics
 - 23 Fade To Black lyrics
 - 24 Love Story lyrics
 - 25 An Angel Came To Me lyrics

Please read our **terms of service** before continuing...

You Don't Miss Your Water ('Til The Well Runs Dry) lyrics

As I sail with you across the finest oceans
 On our way to find the key to our emotions
 Together we will move the clouds to brighter days
 Some people question what I say
 Tried to break up you and me
 But I know this love between us is growing stronger
 You can call me whenever from wherever
 Just remember that
 I'll be there
 Through all the stormy weather
 Us break up never
 No we'll be together
 Forever

[Chorus:]
 You don't miss your water 'til the well runs dry
 But I believe so strongly in you and I
 Can somebody answer me the question why
 You don't miss your water til the well runs dry

As I close my eyes
 Sit back while reminiscing
 Of when we used to fuss and fight but end up kissing
 There may be sad and painful times along the way
 But in my heart you'll always be everything and more to me
 For I know this love between us is growing stronger
 You can call me whenever from wherever
 Just remember that
 I'll be there
 Through all the stormy weather
 Us break up never
 No we'll be together
 Forever

[Chorus:]
 For you are always on my mind
 You are always on my mind
 Girl you know that you
 You are always
 You are always on my mind
 You are always forever

[Chorus:]
 You don't miss your water girl no
 But I believe so strongly in you and I yeah
 Can somebody answer me the question why
 Cause you don't miss your water 'til the well runs dry yeah listen
 If you ever get the feeling
 You wanna play around starting cheating, remember
 You don't miss your water 'til the well runs dry

verizon

Verizon High Speed Internet And Phone

For Just **\$69.99** /MONTH w/ 1-YR AGMT (PLUS TAXES & FEES)

FREE COMPAQ MINI NETBOOK*

(CUSTOMER RESPONSIBLE FOR TAXES, SHIPPING AND HANDLING.)

Order Now!

LastLocation



Timothy S. Deneen (312), Director
Jeffrey J. Thompson (582), Assistant Director
William A. Hauck (581), Secretary



7 North Pinckney Street, Suite 320
Madison, Wisconsin 53703-4262
Telephone: 1-608-251-4120
Facsimile: 1-608-251-7870
utulo56@gmail.com

united transportation union

Wisconsin Legislative Board

ASSEMBLY COMMITTEE ON NATURAL RESOURCES

Packet

29 July 2009

REF: AB314

The United Transportation Union Wisconsin Legislative Board fully supports the goals of Assembly Bill 314. This bill is intended to reduce the risk to railroad employees that are exposed to chemical applications for railroad property vegetation management programs.

In the past, this work was performed by railroad employees using railroad equipment that they were fully trained on. Today, the work is contracted out, with little oversight or enforcement by the industry or the regulatory agencies.

The UTU and their Locals have worked every year to protect their members, as well as the general public. I have included correspondence from this office for the year 2009 with regard to weed spraying issues on the Canadian National and the Burlington Northern Santa Fe. Included in the material is the MSDS sheets for the CN. I have also included a copy of the CN Supt. Bulletin #12 mandating "15 minutes and out the door". This issue is being addressed with CN managers.

OSHA requirements with regard to hazard communications has an expectation that employees will be trained by their employer about the hazards of the chemicals used. This is not being done. The bare minimum is what is being done. Crews can request a copy of the MSDS sheets from their supervisor.

We see no threat to delayed trains or blocked crossings. Spraying schedules can be dictated by the Carriers. Contact with the chemicals occurs in yard switching operations and local road switchers. The over the road freight assignments are kept moving for schedule efficiencies. We do not agree with the assertion that passage of this bill will cause delays or blocked crossing. We do understand the need for vegetation controls, and support the Carriers efforts in this endeavor. We stand ready to work with the Carriers to improve their operations and reduce risks to employees and the general public.

Please support AB 314.

Thank you.

A handwritten signature in black ink, appearing to read 'T. S. Deneen', written over a horizontal line.

T. S. Deneen
State Director

1-800-362-9472
Madison, Wisconsin

Legislative Hotlines



1-202-225-3121
Washington, D.C.



UNITED TRANSPORTATION UNION
UTU POLITICAL ACTION COMMITTEE
WISCONSIN LEGISLATIVE BOARD, LO 086

Timothy S. Deneen (312), Director-Chair
Jeffrey J. Thompson (582), Assistant Director-Vice Chair
William A. Hauck (581), Secretary
7 North Pinckney Street, Suite 320
Madison, Wisconsin 53703-4262
Telephone: 1-608-251-4120
Facsimile: 1-608-251-7870
utulo56@gmail.com

Greg C. Fox
Vice President, Transportation
BNSF Railway Company
2600 Lou Menk Drive
Fort Worth, TX 76161-0030

14 July 2009

VIA U.S. MAIL & E-MAIL
6523.09

Dear Sir:

This office has received communications with regard to employee exposure to chemicals during vegetation control operations by BNSF contractors.

Please refer to Mr. R. A. Olson's letter to Mr. Mike Stoddart (my file 6206.09) regarding crew members and contract van employee's reactions to chemicals used in vegetation control operations in the Superior, Wisconsin area.

Of great concern is the fact that BNSF managers, fully aware of the hazards and precautions contained in the MSDS documents did not initiate a job briefing with the crews prior to the commencement of their work with the contractor applying the chemical.

Please advise this office of BNSF policies and instructions with regard to manager's responsibilities in performing job briefings in this type of situation.

Thank you for your time and attention. I look forward to hearing from you.

Sincerely,

T. S. Deneen
State Director

5573.09



Office of the Superintendent

June 17, 2009

SUPERINTENDENT BULLETIN NO. 12 - Valley Zone

To all concerned:

Effective immediately, all crews are expected to be out in the crew room and properly dressed for their days work at their on-duty-time. This means with boots on and all your PPE gear, lamps, radio, keys etc.

You will be allowed a period of time not exceeding 15 minutes to prepare for your tour of duty. At the end of this 15 minutes, it is expected that you will be departing in a taxi, on your engines, or on your train ready to depart. In other words, wheels rolling.

Dispatchers, clerks and yardmasters need to be sure all necessary lists, journals, bulletins etc. are ready and available for crews at their on duty time.

If for any reason you are unable to comply with these instructions you are to contact a yardmaster or manager of the company and inform them of the reason(s) for your delay.

Yardmasters are required to notify company managers when assignments exceed the allotted time as stated above.

Signed: Walter Sieruga, Superintendent



UNITED TRANSPORTATION UNION
UTU POLITICAL ACTION COMMITTEE
WISCONSIN LEGISLATIVE BOARD, LO 056

Timothy S. Deneen (312), Director-Chair
Jeffrey J. Thompson (582), Assistant Director-Vice Chair
William A. Hauck (581), Secretary
7 North Pinckney Street, Suite 320
Madison, Wisconsin 53703-4262
Telephone: 1-608-251-4120
Facsimile: 1-608-251-7870
utulo56@gmail.com

Mr. John Klaus
CN General Manager
2 Harrison Street
Fond du Lac, WI 54937

7 July 2009

VIA U.S. & E-MAIL
6264.09

Dear Sir:

This office has received communications regarding the Canadian National's weed spraying program.

It is my understanding that employees have not been provided job briefings from managers, nor documents regarding the proper procedures and warnings for working in areas recently treated with chemical applications.

Chemical applications and their formulas, as well as concentrations, spray patterns, and duration may vary depending on the manufacturers, locations, and weather. This information is important to all employees or persons who may come in contact with the chemicals or their residue. Without this knowledge, an adverse reaction may not be diagnosed and treated properly.

I am sure we all agree with the old adage that an ounce of prevention is worth a pound of cure.

Please provide this office with the CN policy regarding safety precautions to be taken following the application of chemical vegetation controls.

Thank you for your time and attention. I look forward to hearing from you.

Sincerely,

T. S. Deneen
State Director



UNITED TRANSPORTATION UNION
UTU POLITICAL ACTION COMMITTEE
WISCONSIN LEGISLATIVE BOARD, LO 056

Timothy S. Deneen (312), Director-Chair
Jeffrey J. Thompson (582), Assistant Director-Vice Chair
William A. Hauck (581), Secretary
7 North Pinckney Street, Suite 320
Madison, Wisconsin 53703-4262
Telephone: 1-608-251-4120
Facsimile: 1-608-251-7870
utulo56@gmail.com

Mr. John Klaus
CN General Manager
2 Harrison Street
Fond du Lac, WI 54937

10 July 2009

VIA U.S. & E-MAIL
6400.09

Dear Sir:

Thank you for your e-mail inquiry with regard to my letter File No. 6264.09. As stated in my original letter, I am concerned that CN managers are apparently not holding a job briefing with crews and reviewing the warnings and handling instructions that are part of the MSDS documents. It is also my understanding that crews are not advised of the weed spraying, and the MSDS documents are only provided upon request.

In my original letter, I requested to be advised what the CN policy and instructions to the managers were as they relate to chemical applications.

I have included an additional copy of my original letter for your reference.

Thank you for your time and attention to this matter. I look forward to hearing from you.

Sincerely,

T. S. Deneen
State Director



Tim Deneen <utulo56@gmail.com>

Weed spray 2009 msds

8 messages

Robert.Bennett@cn.ca <Robert.Bennett@cn.ca>

Thu, Jul 9, 2009 at 4:35 PM

To: utulo56@gmail.com

Cc: Chad.Anderson@cn.ca, John.Klaus@cn.ca, Mark.Bauer@cn.ca, Scott.Motter@cn.ca

Here are the MSDS sheets that RWC (contractor) supplied us with for 2009 Weed program in MN and WI.
Call if any questions. thanks

Rob Bennett
Manager Track Quality CN
C-920.572.3633

6 attachments

 **Msds_ProClipse_65WDG.pdf**
87K

 **M48963 - Razor.pdf**
56K

 **M68118 - EScort XP.pdf**
28K

 **MSDS - Escalade.pdf**
97K

 **MSDS - Oust XP.pdf**
24K

 **MSDS - Payload.pdf**
118K

Tim Deneen <utulo56@gmail.com>

Fri, Jul 10, 2009 at 7:19 AM

To: Robert.Bennett@cn.ca

Cc: Chad.Anderson@cn.ca, John.Klaus@cn.ca, Mark.Bauer@cn.ca, Scott.Motter@cn.ca

Dear Sir,
Thank you for responding. I trust I will receive a response to the additional inquiries made in my letter.
Tim

[Quoted text hidden]

--
Tim Deneen, Director
United Transportation Union
Wisconsin Legislative Board, LO 056
7 N Pinckney Street, Suite 320
Madison, Wisconsin 53703-2840
608 251 4120
utulo56@gmail.com
<http://www.mailbag.com/users/utulo56/index.html>

0



CNWeedSpray6264.09.jpg
218K

Tim Deneen <utulo56@gmail.com>

Fri, Jul 10, 2009 at 7:24 AM

To: "William Andrew Hauck (0581)" <hauck1@sbcglobal.net>, Chris Tassone ALR 581 <cjtass1@yahoo.com>, Jeff Thompson <ttribe@mwwb.net>, "Brett Nordman (582)" <jnordman3987@charter.net>, "Craig C. Peachy Sr. (0583)" <cpeachy@msn.com>, "Eugene Charles Lund (0583)" <local583saftey@live.com>, "Scott A. Seggerman (0583)" <seggerman@charter.net>, GC Ken Flashberger GO987 <utu987@athenet.net>, SLD Phil Qualy MN <utumnlegbd@visi.com>, SLD Bob Guy IL <utuillinois@aol.com>, "SLD Jerry L. Gibson MI" <utumi@comcast.net>, "James Stem (NLD)" <Jamesastem@aol.com>, "Roger Breske (OCR)" <roger.breske@psc.state.wi.us>, "Tom Running (OCR)" <Tom.Running@psc.state.wi.us>, Michael Long FRA <michael.long@dot.gov>

[Quoted text hidden]



CNWeedSpray6264.09.jpg
218K

John.Klaus@cn.ca <John.Klaus@cn.ca>

Fri, Jul 10, 2009 at 11:46 AM

To: Tim Deneen <utulo56@gmail.com>, Robert.Bennett@cn.ca
Cc: Chad.Anderson@cn.ca, Mark.Bauer@cn.ca, Scott.Motter@cn.ca, "Mrs. Lisa Lansing" <Lisa.Lansing@cn.ca>

Tim

What else do you need?

John

From: Tim Deneen [utulo56@gmail.com]
Sent: 10/07/2009 07:19 AM EST
To: Robert Bennett
Cc: Chad Anderson; John Klaus; Mark Bauer; Scott Motter
Subject: Re: Weed spray 2009 msds

[Quoted text hidden]

Tim Deneen <utulo56@gmail.com>

Fri, Jul 10, 2009 at 12:32 PM

To: "William Andrew Hauck (0581)" <hauck1@sbcglobal.net>, Chris Tassone ALR 581 <cjtass1@yahoo.com>, Jeff Thompson <ttribe@mwwb.net>, "Brett Nordman (582)" <jnordman3987@charter.net>, "Craig C. Peachy Sr. (0583)" <cpeachy@msn.com>, "Eugene Charles Lund (0583)" <local583saftay@live.com>, "Scott A. Seggerman (0583)" <seggerman@charter.net>, GC Ken Flashberger GO987 <utu987@athenet.net>, SLD Phil Qualy MN <utumnlegbd@visi.com>, "SLD Jerry L. Gibson MI" <utumi@comcast.net>, SLD Bob Guy IL <utuillinois@aol.com>, "James Stem (NLD)" <Jamesastem@aol.com>, "Roger Breske (OCR)" <roger.breske@psc.state.wi.us>, "Tom Running (OCR)" <Tom.Running@psc.state.wi.us>, Michael Long FRA <michael.long@dot.gov>

----- Forwarded message -----

From: <John.Klaus@cn.ca>
Date: Fri, Jul 10, 2009 at 11:46 AM
Subject: Re: Weed spray 2009 msds

[Quoted text hidden]

[Quoted text hidden]

Robert.Bennett@cn.ca <Robert.Bennett@cn.ca>
To: Tim Deneen <utulo56@gmail.com>
Cc: Chad.Anderson@cn.ca, John.Klaus@cn.ca, Mark.Bauer@cn.ca, Scott.Motter@cn.ca

Mon, Jul 13, 2009 at 10:01 AM

Mr. Deneen included are the spray patterns we typically use. The products the contractor uses to spray our Railroad typically dries as it hits the ground or plant intended. That should answer all your questions. thank you.

Rob Bennett
Manager Track Quality CN
C-920.572.3633

Tim Deneen <utulo56@gmail.com>

07/10/2009 07:19 AM

To Robert.Bennett@cn.ca

cc Chad.Anderson@cn.ca, John.Klaus@cn.ca, Mark.Bauer@cn.ca, Scott.Motter@cn.ca

Subject Re: Weed spray 2009 msds

[Quoted text hidden]

2 attachments



CNWeedSpray6264.09.jpg
218K

 **Spraying pattern for CN ROW.doc**
23K

Tim Deneen <utulo56@gmail.com>
To: Robert.Bennett@cn.ca

Mon, Jul 13, 2009 at 10:54 AM

Cc: Chad.Anderson@cn.ca, John.Klaus@cn.ca, Mark.Bauer@cn.ca, Scott.Motter@cn.ca

Dear Mr. Bennett, Thank you for the follow-up information on spray patterns. Tim

[Quoted text hidden]

Tim Deneen <utulo56@gmail.com>

Mon, Jul 13, 2009 at 10:57 AM

To: "William Andrew Hauck (0581)" <hauck1@sbcglobal.net>, Chris Tassone ALR 581 <cjtass1@yahoo.com>, Jeff Thompson <ttribe@rnwwb.net>, "Brett Nordman (582)" <jnordman3987@charter.net>, "Craig C. Peachy Sr. (0583)" <cpeachy@msn.com>, "Eugene Charles Lund (0583)" <local583saftey@live.com>, "Scott A. Seggerman (0583)" <seggerman@charter.net>, GC Ken Flashberger GO987 <utu987@athenet.net>, SLD Phil Qualy MN <utumlegbd@visi.com>, "SLD Jerry L. Gibson MI" <utumi@comcast.net>, SLD Bob Guy IL <utuillinois@aol.com>, "James Stem (NLD)" <Jamesastem@aol.com>, "Roger Breske (OCR)" <roger.breske@psc.state.wi.us>, "Tom Running (OCR)" <Tom.Running@psc.state.wi.us>, Michael Long FRA <michael.long@dot.gov>

----- Forwarded message -----

From: **Tim Deneen** <utulo56@gmail.com>

Date: Mon, Jul 13, 2009 at 10:54 AM

Subject: Re: Weed spray 2009 msds

To: Robert.Bennett@cn.ca

[Quoted text hidden]

[Quoted text hidden]

RIVERDALE® RAZOR®

For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, Call CHEMTREC Day or Night: 1-800-424-9300.

For Medical Emergencies Only, Call 1-877-325-1840.

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Riverdale® Razor®
Synonyms: Isopropylamine Salt of Glyphosate; Glyphosate IPA Salt
EPA Reg. No.: 228-366
Company Name:
 Nufarm Americas Inc.
 1333 Burr Ridge Parkway, Suite 125A
 Burr Ridge, IL 60527
Date of Issue: March 24, 2005
Supersedes: February 21, 2003
Sections Revised: All - new ANSI format

2. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance and Odor: Clear, viscous greenish/yellow solution with little odor.

Warning Statements: Keep out of reach of children. CAUTION. Causes moderate eye irritation. Harmful if swallowed or inhaled. Do not get in eyes or on clothing. Avoid breathing vapor or spray mist.

Potential Health Effects:

Likely Routes of Exposure: Skin contact and inhalation.

Eye Contact: The undiluted product may cause pain, redness and tearing based on toxicity studies.

Skin Contact: This product is no more than slightly toxic and no more than slightly irritating based on toxicity studies.

Ingestion: This product is no more than slightly toxic based on toxicity studies. No significant adverse health effects are expected to develop if only small amounts (less than a mouthful) are swallowed.

Inhalation: This product is no more than slightly toxic if inhaled based on toxicity studies.

Medical Conditions Aggravated by Exposure: None known

See Section 11: TOXICOLOGICAL INFORMATION for more information

Potential Environmental Effects:

Available data on similar formulations suggest that this product would be slightly to moderately toxic to aquatic organisms and practically non-toxic to avian species, honeybees and earthworms.

See Section 12: ECOLOGICAL INFORMATION for more information

3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS NO.	% BY WEIGHT
Glyphosate, N-(phosphonomethyl) glycine, in the form of its isopropylamine salt	38841-94-0	41.0
Other Ingredients Including:		59.0
Ethoxylated Tallowamines	61791-26-2	

4. FIRST AID MEASURES

If In Eyes: Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

If Swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

If Inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

If on Skin: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

5. FIRE FIGHTING MEASURES

Flash Point: None

Autoignition Temperature: Not determined

Flammability Limits: Not determined

Extinguishing Media: In case of fire, use water (flood with water), dry chemical, CO₂, or alcohol foam.

Special Fire Fighting Procedures: Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full fire-fighting turn out gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.

Unusual Fire and Explosion Hazards: Containers will burst from internal pressure under extreme fire conditions. If water is used to fight fire or cool containers, dike to prevent runoff contamination of municipal sewers and waterways.

Hazardous Decomposition Materials (Under Fire Conditions): Under fire conditions, may produce gases such as nitrogen oxides, carbon oxides and phosphorous oxides.

National Fire Protection Association (NFPA) Hazard Rating:

Rating for this product:

Health: 1

Flammability: 1

Reactivity: 0

Hazards Scale:

0 = Minimal

1 = Slight

2 = Moderate

3 = Serious

4 = Severe

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.

Environmental Precautions: Prevent material from entering public sewer systems or any waterways. Do not flush to drain. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal.

Methods for Containment: Dike spill using absorbent or impervious materials such as earth, sand or clay. Collect and contain contaminated absorbent and dike material for disposal.

Methods for Clean-Up and Disposal: Thoroughly scrub floor or other impervious surface with a strong industrial detergent and rinse with water. See Section 13: DISPOSAL CONSIDERATIONS for more information.

Other Information: Large spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

7. HANDLING AND STORAGE

Handling:

Do not get in eyes or on clothing. Avoid breathing vapor or spray mist. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Spray solutions of this product should be mixed, stored and applied using only stainless steel, aluminum, fiber-glass, plastic or plastic-lined containers.

DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

Storage:

Do not contaminate water, foodstuff, feed or seed by storage or disposal. STORE ABOVE 10°F (-12°C) TO KEEP PRODUCT FROM CRYSTALLIZING. Crystals will settle to the bottom. If allowed to crystallize, place in a warm room 68°F (20°C) for several days to redissolve and shake, roll or agitate to mix well before using.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:

Where engineering controls are indicated by specific use conditions or a potential for excessive exposure, use local exhaust ventilation at the point of generation. When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], then handler PPE requirements may be reduced or modified as specified in the WPS.

Personal Protective Equipment:

Eye/Face Protection: To avoid contact with eyes, wear chemical goggles or shielded safety glasses. An emergency eyewash should be readily accessible to the work area.

Skin Protection: To avoid contact with skin, wear long pants, long-sleeved shirt, socks and shoes. An emergency shower should be readily accessible to the work area.

Respiratory Protection: Not normally required. If vapors or mists exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.

General Hygiene Considerations: Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material: 1) Do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored. 2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.

Exposure Guidelines:

Component	OSHA		ACGIH		Unit
	TWA	STEL	TWA	STEL	
Isopropylamine Salt of Glyphosate	NE	NE	NE	NE	
Ethoxylated Tallowamines	NE	NE	NE	NE	

NE = Not Established

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Clear, viscous greenish/yellow solution with little odor.

Boiling Point: Not determined

Density: 9.67 pounds/gallon

Evaporation Rate: Not determined

Freezing Point: 10°F (-12°C)

pH: 4.84 (1% solution)

Solubility in Water: Soluble

Specific Gravity: 1.18 @ 20°C

Vapor Density: Not determined

Vapor Pressure: Not determined

Viscosity: 29.5 cPs @ 20°C

Note: Physical data are typical values, but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification.

10. STABILITY AND REACTIVITY

Chemical Stability: This material is stable under normal handling and storage conditions.

Conditions to Avoid: Excessive heat. Do not store near heat or flame.

Incompatible Materials: Strong oxidizing agents; bases and acids. This product reacts with galvanized steel or unlined steel (except stainless steel) to produce hydrogen gas that may form a highly combustible gas mixture which could flash or explode.

Hazardous Decomposition Products: Under fire conditions, may produce gases such as nitrogen oxides, carbon oxides and phosphorous oxides.

Hazardous Reactions: Hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicological Data:

Data from laboratory studies conducted on a similar, but not identical, formulation:

Oral: Rat LD₅₀: >5,000 mg/kg; FIFRA Category IV

Dermal: Rat LD₅₀: >5,000 mg/kg; FIFRA Category IV

Inhalation: Rat 4-hr LC₅₀: >2.05 mg/L; FIFRA Category IV

Eye Irritation: Rabbits (6): Moderately irritating (including transient corneal opacity) to unrinsed eyes. Mildly irritating to rinsed eyes. Unrinsed eyes cleared by day 7 and rinsed eyes cleared by 72 hours; FIFRA Category III

Skin Irritation: Rabbits (3): Slightly irritating. Cleared in all animals within 72 hours; FIFRA Category IV

Skin Sensitization: Not a contact sensitizer in guinea pigs following repeated skin exposure.

Toxicity of Isopropylamine Salt of Glyphosate:

In repeat dosing studies (6 month), dogs fed a more concentrated form of this product exhibited slight body weight changes. Following repeated skin exposure (3 weeks) to this product, skin irritation was the primary effect in rabbits. No skin allergy was observed in guinea pigs following repeated skin exposure.

Additional toxicity information is available on glyphosate, the active herbicidal ingredient of this product. Following repeated exposures (90 days) to glyphosate in their feed, decreased weight gains were noted at the highest test level in mice, while no treatment-related effects occurred in rats. Following repeated skin exposure (3 weeks) to glyphosate, slight skin irritation was the primary effect observed in rabbits. No skin allergy was observed in guinea pigs following repeated skin exposure. There was no evidence of effects on the nervous system, including delayed effects in chickens (repeat oral doses) or cholinesterase inhibition in rats (single oral doses). Reduced body weight gain and effects on liver tissues were observed with long-term (2 year) feeding of glyphosate to mice at high-dose levels. Reduced body weight gain and eye changes were observed at the high-dose level in one long-term (2 year) feeding study with rats, while no treatment related effects occurred in a second study. No adverse effects were observed in feeding studies with dogs. Glyphosate did not produce tumors in any of these studies.

Based on the results from the chronic studies, EPA has classified glyphosate in category E (evidence of non-carcinogenicity for humans). No birth defects were noted in rats and rabbits given glyphosate orally during pregnancy, even at amounts which produced adverse effects on the mothers. Glyphosate was fed continuously to rats at very high dose levels for 2 successive generations. Toxicity was reported in offspring from the high dose, a level which also produced adverse effects on the mothers. In a 3 generation study conducted at lower dose levels, no effects were seen on the ability of male or female rats to reproduce. Glyphosate has produced no genetic changes in a variety of standard tests using animals and animal or bacterial cells.

Toxicity of Ethoxylated Tallowamines:

The surfactant component of this product is reported to cause irritation to the eyes and skin and may contribute to the irritation potential reported for this herbicide. Ingestion may produce gastrointestinal irritation, nausea, vomiting and diarrhea.

Assessment Carcinogenicity: None listed with ACGIH, IARC, NTP or OSHA.

See Section 2: HAZARDOUS IDENTIFICATION for more information.

12. ECOLOGICAL INFORMATION

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

Available data on similar formulations suggest that this product would be slightly to moderately toxic to aquatic organisms and practically non-toxic to avian species, honey bees and earthworms.

Ecotoxicity:

Data from laboratory studies conducted on a similar, but not identical, formulation:

Rainbow Trout 96-hr LC₅₀: 22 mg/L (static)

Rainbow Trout 96-hr LC₅₀: 8.2 mg/L (dynamic)

Daphnia Magna 48-hr LC₅₀: 37 mg/L (aeration)

Daphnia Magna 48-hr LC₅₀: 24 mg/L (without aeration)

Bluegill Sunfish 96-hr LC₅₀: 5.8 mg/L (dynamic)

Bluegill Sunfish 96-hr LC₅₀: 14 mg/L (static)

Gammarus pseudolimnaeus 48-hr EC₅₀: 42 mg/L

Fathead minnow 96-hr LC₅₀: 9.4 mg/L

Channel Catfish 96-hr LC₅₀: 16 mg/L

Chinook Salmon 96-hr LC₅₀: 20 mg/L

Coho Salmon 96-hr LC₅₀: 22 mg/L

Bobwhite Quail 8-day LC₅₀: >6,300 ppm

Mallard Duck 8-day LC₅₀: >6,300 ppm

Algae S. Capricornutum 72-hr EC₅₀: 2.1 mg/L

Environmental Fate:

In the environment, salts of glyphosate rapidly dissociate to glyphosate, which adsorbs strongly to soil and is expected to be immobile in soil. Glyphosate is readily degraded by soil microbes to AMPA (aminomethyl phosphonic acid) that is further degraded to carbon dioxide. Glyphosate and AMPA are unlikely to enter ground water due to their strong adsorptive characteristics. Terrestrially-applied glyphosate has the potential to move into surface waters through soil erosion because it may be adsorbed to soil particles suspended in the runoff. Aquatic applications registered for certain formulations may also result in glyphosate entering surface waters. Complete degradation is slow, but dissipation in water is rapid because glyphosate is bound in sediments and has low biological availability to aquatic organisms. These characteristics suggest a low potential for bioconcentration in aquatic organisms and this has been verified by laboratory investigations of glyphosate bioconcentration in numerous marine and freshwater organisms with and without soil. The maximum whole body bioconcentration factors for fish were observed to be less than 1X. Bioconcentration factors for sediment dwelling mollusks and crayfish tended to be slightly higher, but were always less than 10X. In addition, any residues accumulated in organism were rapidly eliminated.

13. DISPOSAL CONSIDERATIONS

Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

Waste Disposal Method:

Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state or local procedures. Emptied container retains vapor and product residue. Observe all label safeguards until container is destroyed.

Container Handling and Disposal:

Plastic Bottles and Non-Returnable Plastic Drums: Do not reuse container. Triple rinse container. Then puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Returnable/Refillable Containers: Close all openings and replace all caps. Contact Nufarm Customer Service at 1-800-345-3330, to arrange for return of the empty refillable container.

14. TRANSPORTATION INFORMATION

Follow the precautions indicated in Section 7: HANDLING AND STORAGE of this MSDS.

For Department of Transportation (DOT) regulatory information, if required, consult transportation regulations, product-shipping papers or call Nufarm's DOT Manager at 708-755-2104, Monday through Friday, 8:00 AM to 5:00 PM Central Time.

15. REGULATORY INFORMATION

U.S. Federal Regulations:

TSCA Inventory: This product is exempted from TSCA because it is solely for FIFRA regulated use.

SARA Hazard Notification/Reporting:

Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370): Immediate

Section 313 Toxic Chemical(s): None

Reportable Quantity (RQ) under U.S. CERCLA:

None

RCRA Waste Code: None

State Information:

Other state regulations may apply. Check individual state requirements.

California Proposition 65: Not listed

16. OTHER INFORMATION

This Material Safety Data Sheet (MSDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-ACCEPTED PRODUCT LABELING (attached to and accompanying the product container). This MSDS provides important health, safety

and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of federal law to use a pesticide product in any manner not prescribed on the EPA-accepted label.

Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, Nufarm Americas Inc. makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will Nufarm Americas Inc. be responsible for damages of any nature whatsoever resulting from the use or of reliance upon Information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS.

Razor and Riverdale are registered trademarks of Nufarm Americas Inc.

VID 3.25.05

ESCORT XP HERBICIDE

M0000459

Revised 3-14-03

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

"ESCORT" is a registered trademark of DuPont.

"DuPont" is a trademark of DuPont.

Grade: 60% FORMULATION

Tradenames and Synonyms

METSULFURON METHYL

"ESCORT" 60DF

Company Identification

MANUFACTURER/DISTRIBUTOR

DuPont

1007 Market Street

Wilmington, DE 19898

PHONE NUMBERS

Product Information: 1-800-441-7515 (outside the U.S. 302-774-1000)

Transport Emergency: CHEMTREC 1-800-424-9300 (outside U.S. 703-527-3887)

Medical Emergency: 1-800-441-3637 (outside the U.S. 302-774-1000)

COMPOSITION/INFORMATION ON INGREDIENTS

Components

Material	CAS Number	%
METSULFURON METHYL	74223-64-6	60
(METHYL 2-[[[(4-METHOXY-6-METHYL-1,3,5-TRIAZIN-2-YL)AMINO]CARBONYL]AMINO]SULFONYL] = BENZOATE)		
INERT INGREDIENTS		40

HAZARDS IDENTIFICATION

Emergency Overview

CAUTION! Causes eye irritation. Avoid contact with skin, eyes or clothing. Avoid breathing dust or spray mist.

Potential Health Effects

Based on animal data, eye contact with ESCORT xp may cause eye irritation with tearing, pain or blurred vision.

Based on animal data, repeated dermal contact with the active ingredient may cause skin irritation with itching, burning, redness, swelling or rash.

Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

FIRST AID MEASURES

First Aid

INHALATION:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

SKIN CONTACT:

In case of contact, rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for further treatment advice.

EYE CONTACT:

In case of contact, hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.

INGESTION:

No specific intervention is indicated as compound is not likely to be hazardous by ingestion. Consult a physician if necessary.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-441-3637 for emergency medical treatment information.

FIRE FIGHTING MEASURES

Flammable Properties

Not a fire or explosion hazard.

Like most organic powders or crystals, under severe dusting conditions, this material may form explosive mixtures in air.

Extinguishing Media

Water Spray, Foam, Dry Chemical, CO₂.

Fire Fighting Instructions

Evacuate personnel to a safe area. Wear self-contained breathing apparatus. Wear full protective equipment. Use water spray. Runoff from fire control may be a pollution hazard.

If area is exposed to fire and conditions permit, let fire burn itself out. Burning chemicals may produce by-products more toxic than the original material. If product is on fire, wear self-contained breathing apparatus and full protective equipment. Use water spray. Control runoff.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Emergency Response - Chemical resistant coveralls, waterproof gloves, waterproof boots and face/eye protection. If dusting occurs, use NIOSH approved respirator protection.

Initial Containment

Dike spill. Prevent material from entering sewers, waterways, or low areas.

Follow applicable Federal, State/Provincial and Local laws/regulations.

Spill Clean Up

Shovel or sweep up.

HANDLING AND STORAGE

Handling (Personnel)

Avoid breathing vapors or mist. Avoid breathing dust. Avoid contact with eyes, skin, or clothing. Wash thoroughly after handling. Wash clothing after use. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material.

USERS SHOULD: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

Handling (Physical Aspects)

Keep away from heat, sparks and flames.

Storage

Store product in original container only. Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Store in a cool, dry place. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Use only with adequate ventilation.

Personal Protective Equipment

Always follow the label instructions when handling this product.

Applicators and other handlers must wear:

Long-sleeved shirt and long pants.

Shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

Coveralls.

Shoes plus socks.

Exposure Guidelines

Applicable Exposure Limits

METSULFURON METHYL

PEL (OSHA): None Established

TLV (ACGIH): None Established

AEL * (DuPont): 10 mg/m³, 8 & 12 Hr. TWA

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Solubility in Water: Dispersible

Odor: Slight

Form: Solid granule

Color: Light brown

Specific Gravity: 1.47 @ 25C (77F)

Bulk Density (Tap Bulk Density): 0.64 - 0.74 g/mL

STABILITY AND REACTIVITY

Chemical Stability

Stable at normal temperatures and storage conditions.

Incompatibility with Other Materials

None reasonably foreseeable.

Decomposition

Decomposition will not occur.

Polymerization

Polymerization will not occur.

TOXICOLOGICAL INFORMATION

Animal Data

ESCORT xp

Oral LD50: > 5000 mg/kg in rats (Very low toxicity)

Skin LD50: > 2000 mg/kg in rabbits (Slight to moderate toxicity)

ESCORT xp is a slight eye irritant, but is not a skin irritant or skin sensitizer in animal tests.

Metsulfuron Methyl

Inhalation LC50, 4 hr: > 5.3 mg/L in rats (Very low toxicity)

Single exposures of animals to Metsulfuron Methyl by inhalation caused body weight loss and other nonspecific effects.

Repeated applications of Metsulfuron Methyl to the skin of rabbits caused skin irritation but no other changes were observed.

Repeated oral doses of Metsulfuron Methyl produced decreased body weight gain and decreased liver weights when compared to the control group. Long term administration caused body weight loss.

Animal testing indicates that Metsulfuron Methyl does not have carcinogenic, developmental, or reproductive effects.

There is a report indicating that Metsulfuron Methyl produced genetic damage in a mammalian cell culture test; however, other tests with Metsulfuron Methyl in bacterial and mammalian cell cultures and in animals did not produce genetic damage. The weight of evidence suggests that Metsulfuron Methyl does not cause genetic damage.

ECOLOGICAL INFORMATION

Ecotoxicological Information

AQUATIC TOXICITY:

METSULFURON METHYL

96 hour LC50 - Rainbow trout: > 150 ppm.

96 hour LC50 - Bluegill sunfish: > 150 ppm.

AVIAN TOXICITY:

METSULFURON METHYL

LD50 - Mallard Duck: > 2510 mg/kg.

LC50 - Bobwhite Quail: > 5620 mg/kg

DISPOSAL CONSIDERATIONS

Waste Disposal

Do not contaminate water, food, or feed by disposal. Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

ENVIRONMENTAL HAZARDS:

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, state/provincial, and local regulations.

Container Disposal

For Plastic Containers: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

For Fiber Sacks: Completely empty fiber sack by shaking and tapping sides and bottom to loosen clinging

particles. Empty residue into manufacturing or application equipment. Then dispose of sack in a sanitary landfill or by incineration if allowed by state and local authorities.

For Fiber Drums with Liners: Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of liner in a sanitary landfill or by incineration if allowed by State and local authorities. If drum is contaminated and cannot be reused, dispose of in the same manner.

For Bags Containing Water Soluble Packets: Do not reuse the outer box or the resealable plastic bag. When all water-soluble packets are used, the outer packaging should be clean and may be disposed of in a sanitary landfill or by incineration, or if allowed by State and local authorities, by open burning. If burned, stay out of smoke. If the resealable plastic bag contacts the formulated product in any way, the bag must be triple-rinsed with clean water. Add the rinsate to the spray tank and dispose of the outer wrap as described above.

For Metal Containers (non aerosol): Triple rinse (or equivalent) the container. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities.

For Paper and Plastic Bags: Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

TRANSPORTATION INFORMATION

Shipping Information

DOT/IMO

Proper Shipping Name: NOT REGULATED

REGULATORY INFORMATION

U.S. Federal Regulations

TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

Acute: Yes

Chronic: No

Fire: No

Reactivity: No

Pressure: No

In the United States this product is regulated by the US Environmental Protection Agency under the Federal Insecticide, Fungicide and Rodenticide Act. It is a violation of federal law to use this product in a manner inconsistent with its labeling.

EPA Reg. No. 352-439

OTHER INFORMATION

NFPA, NPCA-HMIS**NFPA Rating**

Health: 1

Flammability: 1

Reactivity: 0

NPCA-HMIS Rating

Health: 1

Flammability: 1

Reactivity: 0

Personal Protection rating to be supplied by user depending on use conditions.

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Responsibility for MSDS: DuPont Crop Protection

Address: Wilmington, DE 19898

Telephone: 1-888-638-7668

This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.

VID 7.21.03



For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident,
Call CHEMTREC Day or Night: 1-800-424-9300.
For Medical Emergencies Only, Call 1-877-325-1840.

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Riverdale® Escalade™
Synonyms: Herbicide Mixture of 2,4-D, Fluroxypyr and Dicamba
EPA Reg. No.: 228-417

Company Name: Nufarm Americas Inc.
1333 Burr Ridge Parkway, Suite 125A
Burr Ridge, IL 60527

Date of Issue: June 17, 2005 **Supersedes:** December 21, 2004
Sections Revised: New or updated information all sections

2. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance and Odor: Amber colored liquid with a slight amine odor.

Warning Statements: Keep out of reach of children. WARNING. Causes substantial but temporary eye injury. Harmful if swallowed or absorbed through skin. Do not get in eyes, on skin or on clothing.

Potential Health Effects:

Likely Routes of Exposure: Inhalation, eye and skin contact

Eye Contact: Causes substantial but temporary eye damage. Vapors and mist may cause irritation.

Skin Contact: Moderately irritating. Overexposure by skin absorption may cause symptoms similar to those for ingestion.

Ingestion: Harmful if swallowed. May cause headache, dizziness, nausea, vomiting, gastrointestinal irritation, weakness and central nervous system depression.

Inhalation: Low inhalation toxicity.

Medical Conditions Aggravated by Exposure: Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis. Skin contact may aggravate existing skin disease.

See Section 11: TOXICOLOGICAL INFORMATION for more information

Potential Environmental Effects:

This product is toxic to fish. Drift or runoff from treated areas may be hazardous to aquatic organisms and non-target plants.

See Section 12: ECOLOGICAL INFORMATION for more information

3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS NO.	% BY WEIGHT
Dimethylamine Salt of 2,4-Dichlorophenoxyacetic Acid	2008-39-1	39.53
1-Methylheptyl Ester of Fluroxypyr	81406-37-3	11.82
Dicamba (3,6-Dichloro-o-Anisic Acid)	1918-00-9	4.10
Other Ingredients Including:		44.55
Aromatic Solvent	64742-94-5	
(Contains Naphthalene)	91-20-3	

4. FIRST AID MEASURES

If in Eyes: Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

If Swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

If on Skin: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

If Inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

5. FIRE FIGHTING MEASURES

Flash Point: >230°F (>110°C) (Setaflash)

Autoignition Temperature: Not determined

Flammability Limits: Not determined

Extinguishing Media: Recommended for large fires: foam or water spray. Recommended for small fires: dry chemical or carbon dioxide.

Special Fire Fighting Procedures: Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full fire-fighting turn out gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.

Unusual Fire and Explosion Hazards: If water is used to fight fire, contain runoff, using dikes to prevent contamination of water supplies. Dispose of fire control water later.

Hazardous Decomposition Materials (Under Fire Conditions): May produce gases such as hydrogen chloride, nitrogen oxides, and carbon oxides.

National Fire Protection Association (NFPA) Hazard Rating:

Rating for this product: Health: 2 Flammability: 1 Reactivity: 1

Hazards Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.

Environmental Precautions: Prevent material from entering public sewer systems or any waterways. Do not flush to drain. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal.

Methods for Containment: Dike spill using absorbent or impervious materials such as earth, sand or clay. Collect and contain contaminated absorbent and dike material for disposal.

Methods for Clean-Up and Disposal: Pump any free liquid into an appropriate closed container. Collect washings for disposal. Decontaminate tools and equipment following cleanup. See Section 13: DISPOSAL CONSIDERATIONS for more information.

Other Information: Large spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

7. HANDLING AND STORAGE

Handling:

Do not get in eyes, on skin or on clothing. Users should wash hands, face and arms with soap and water before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove Personal Protective Equipment (PPE) immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

If the container is over one gallon and less than five gallons, then persons engaged in open pouring of the product must also wear coveralls or a chemical-resistant apron. If the container is five gallons or more in capacity, do not open pour product from the container. A mechanical system (such as a probe and pump or spigot) must be used for transferring the contents of the container. If the contents of a non-refillable pesticide container are emptied, the probe must be rinsed before removal.

Storage:

Always use original container to store pesticides in a secured warehouse or storage building. Protect from freezing. Store at temperatures above 25°F. If allowed to freeze, remix before using. This does not alter the product. Containers should be opened in well-ventilated areas. Keep container tightly sealed when not in use. Do not stack cardboard cases more than two pallets high. Do not store near open containers of fertilizer, seed or other pesticides. Do not contaminate water, food or feed by storage and disposal.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:

Where engineering controls are indicated by specific use conditions or a potential for excessive exposure, use local exhaust ventilation at the point of generation.

Personal Protective Equipment:

Eye/Face Protection: To avoid contact with eyes, wear face shield, goggles or safety glasses with front, brow and temple protection. An emergency eyewash should be readily accessible to the work area.

Skin Protection: To avoid contact with skin, wear long pants, long-sleeved shirt, socks, shoes and chemical-resistant gloves. When open pouring the product, also wear coveralls or a chemical-resistant apron. An emergency shower should be readily accessible to the work area.

Respiratory Protection: Not normally required. If vapors or mists exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.

General Hygiene Considerations: Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material: 1) Do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored. 2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.

Exposure Guidelines:

Component	OSHA		ACGIH		Unit
	TWA	STEL	TWA	STEL	
DMA Salt of 2,4-D	10*	NE	10*	NE	mg/m ³
Fluroxypyr	NE	NE	NE	NE	
Dicamba	NE	NE	NE	NE	
Naphthalene	10	NE	10 (Skin)	15 (Skin)	ppm

*Based on adopted limit for 2,4-D

NE = Not Established

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Amber colored liquid with a slight amine odor.

Boiling Point:	Not determined	Solubility in Water:	Soluble
Density:	9.70 pounds/gallon	Specific Gravity:	1.162
Evaporation Rate:	Not determined	Vapor Density:	Not determined
Freezing Point:	25°F (4°C)	Vapor Pressure:	Not determined
pH:	5.48 (1% solution)	Viscosity:	58.0 cps @ 25°C

Note: Physical data are typical values, but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification.

10. STABILITY AND REACTIVITY

Chemical Stability: This material is stable under normal handling and storage conditions.
Conditions to Avoid: Excessive heat. Do not store near heat or flame.
Incompatible Materials: Strong oxidizing agents: bases and acids.
Hazardous Decomposition Products: Under fire conditions, may produce gases such as hydrogen chloride, nitrogen oxides, and carbon oxides.
Hazardous Reactions: Hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicological Data:

Data from laboratory studies on this product are summarized below:

- Oral:** Rat LD₅₀: 1, 750 mg/kg (female); FIFRA Category III
- Dermal:** Rats LD₅₀: >2,000 and <5,000 mg/g; FIFRA Category III
- Inhalation:** Rat 4-hr LC₅₀: >2.07 mg/L; FIFRA Category IV
- Eye Irritation:** Rabbits (3): Moderately irritating; FIFRA Category II
- Skin Irritation:** Rabbits (3); Moderately irritating; FIFRA Category III
- Skin Sensitization:** Not a contact sensitizer in guinea pigs following repeated skin exposure.

Subchronic (Target Organ) Effects: Repeated overexposure may cause effects to liver, kidneys, blood chemistry, testes and gross motor function. Rare cases of peripheral nerve damage have been reported, but extensive animal studies have failed to substantiate these observations, even at high doses for prolonged periods.

Carcinogenicity / Chronic Health Effects: The International Agency for Research on Cancer (IARC) lists exposure to chlorophenoxy herbicides as a class 2B carcinogen, the category for limited evidence for carcinogenicity in humans. However, more current 2,4-D lifetime feeding studies in rats and mice did not show carcinogenic potential. The U.S. EPA has given 2,4-D and dicamba a Class D classification (not classifiable as to human carcinogenicity). Fluroxypyr did not cause cancer in laboratory animals. The hydrocarbon component may contain naphthalene, which is listed by IARC as a class 2B and the U.S. National Toxicology Program as reasonably anticipated to be a human carcinogen.

Reproductive Toxicity: No impairment of reproductive function attributable to 2,4-D have been noted in laboratory animal studies. In animal studies, fluroxypyr has been shown not to interfere with reproduction. Dicamba did not interfere with fertility in reproduction studies in laboratory animals.

Developmental Toxicity: Studies in laboratory animals with 2,4-D have shown decreased fetal body weights and delayed development in the offspring at doses toxic to mother animals. Fluroxypyr did not cause birth defects in animals; other effects were seen in the fetus only at doses which caused toxic effects in the mother. Animal tests with dicamba have not demonstrated developmental effects.

Genotoxicity: There have been some positive and some negative studies, but the weight of evidence is that 2,4-D is not mutagenic. Animal tests with fluroxypyr and dicamba did not demonstrate mutagenic effects.

Assessment Carcinogenicity:

This product contains substances that are considered to be probable or suspected human carcinogens as follows:

Component	Regulatory Agency Listing As Carcinogen			
	ACGIH	IARC	NTP	OSHA
Chlorophenoxy Herbicides	No	2B	No	No
Naphthalene	No	2B	Yes*	No

*Reasonably anticipated to be a human carcinogen
 See Section 2: HAZARDOUS IDENTIFICATION for more information.

12. ECOLOGICAL INFORMATION

Ecotoxicity:**Data on 2,4-D Dimethylamine Salt**

96-hour LC ₅₀ Bluegill:	524 mg/l	Bobwhite Quail Oral LD ₅₀ :	500 mg/kg
96-hour LC ₅₀ Rainbow Trout:	250 mg/l	Mallard Duck 8 day Dietary LC ₅₀ :	>5,620 ppm
48 hour EC ₅₀ Daphnia:	184 mg/l		

***Data on Fluroxypyr 1-Methylheptyl Ester:**

Acute LC ₅₀ Blue Gill: above water solubility	Bobwhite Quail Acute Oral LD ₅₀ :	>2,000 mg/kg
Acute LC ₅₀ Rainbow Trout: above water solubility	Mallard Duck Acute Oral LC ₅₀ :	>2,000 mg/kg
Acute Immobilization EC 50 Daphnia Magna: >499 µg/L		

*Fluroxypyr 1-Methylheptyl Ester is highly insoluble in water.

Data on Dicamba

96-hour LC ₅₀ Bluegill:	135 mg/l	Bobwhite Quail 8 day Dietary LC ₅₀ :	>10,000 ppm
96-hour LC ₅₀ Rainbow Trout:	135 mg/l	Mallard Duck 8 day Dietary LC ₅₀ :	>10,000 ppm
48 hour EC ₅₀ Daphnia:	110 mg/l		

Environmental Fate:

In laboratory and field studies, 2,4-D DMA salt rapidly dissociated to parent acid in the environment. The typical half-life of the resultant 2,4-D acid ranged from a few days to a few weeks. Fluroxypyr has a hydrolysis half-life of 12.8 to 16.5 hours. Under aerobic and anaerobic soil conditions the half-life for Fluroxypyr is 7 days. Dicamba has low bioaccumulation potential, is not persistent in soil, is highly mobile in soil and degrades rapidly.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:

Pesticide wastes are toxic. If container is damaged or if pesticide has leaked, contain all spillage. Absorb and clean up all spilled material with granules or sand. Place in a closed, labeled container for proper disposal. Improper disposal of excess pesticide, spray mixtures, or rinsate is a violation of Federal law and may contaminate groundwater. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Handling and Disposal:

Plastic Bottles and Non-Returnable Plastic Drums: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Returnable/Refillable Containers: Close all openings and replace all caps. Contact Nufarm Customer Service at 1-800-345-3330, to arrange for return of the empty refillable container.

14. TRANSPORTATION INFORMATION

Follow the precautions indicated in Section 7: HANDLING AND STORAGE of this MSDS.

For Department of Transportation (DOT) regulatory information, if required, consult transportation regulations, product-shipping papers or call Nufarm's DOT Manager at 708-755-2104, Monday through Friday, 8:00 AM to 5:00 PM Central Time.

15. REGULATORY INFORMATION**U.S. Federal Regulations:**

TSCA Inventory: This product is exempted from TSCA because it is solely for FIFRA regulated use.

SARA Hazard Notification/Reporting:

Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370):

Immediate, Delayed

Section 313 Toxic Chemical(s):

Acetic Acid, (2,4-Dichlorophenoxy)- (CAS No. 94-75-7), 32.83% equivalent by weight in product

Dicamba (CAS No. 1918-00-9), 4.10% by weight in product

Naphthalene (CAS No. 91-20-3), 0.77% by weight in product

Reportable Quantity (RQ) under U.S. CERCLA:

Acetic Acid, (2,4-Dichlorophenoxy)- (CAS No. 94-75-7) 100 pounds

Dicamba (CAS No. 1918-00-9) 1,000 pounds

Naphthalene (CAS No. 91-20-3) 100 pounds

RCRA Waste Code:

Acetic Acid, (2,4-Dichlorophenoxy)- (CAS No. 94-75-7) U240

Naphthalene (CAS No. 91-20-3) U165

State Information:

Other state regulations may apply. Check individual state requirements.

California Proposition 65: WARNING. This product contains chemicals known to the State of California to cause cancer or birth defects or other reproductive harm.

16. OTHER INFORMATION

This Material Safety Data Sheet (MSDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-ACCEPTED PRODUCT LABELING (attached to and accompanying the product container). This MSDS provides important health, safety and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of federal law to use a pesticide product in any manner not prescribed on the EPA-accepted label.

Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, Nufarm Americas Inc. makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will Nufarm Americas Inc. be responsible for damages of any nature whatsoever resulting from the use or of reliance upon Information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS.

Escalade is a trademark of Nufarm Americas Inc.

Riverdale is a registered trademark of Nufarm Americas Inc.

DUPONT OUST XP HERBICIDE

M0000437
Revised 20-JUN-2005

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

"OUST" is a registered trademark of DuPont.
"DuPont" is a trademark of DuPont.

Tradenames and Synonyms

SULFOMETURON METHYL
DPX-T5648

Company Identification

MANUFACTURER/DISTRIBUTOR

DuPont
1007 Market Street
Wilmington, DE 19898

PHONE NUMBERS

Product Information: 1-800-441-7515 (outside the U.S. 302-774-1000)

Transport Emergency: CHEMTREC 1-800-424-9300 (outside U.S. 703-527-3887)

Medical Emergency: 1-800-441-3637 (outside the U.S. 302-774-1000)

COMPOSITION/INFORMATION ON INGREDIENTS

Components

Material	CAS Number	%
SULFOMETURON METHYL	74222-97-2	75
(METHYL 2-[[[4,6-DIMETHYL-2-PYRIMIDINYL]-AMINO]CARBONYL]AMINO]SULFONYL]BENZOATE)		25
INERT INGREDIENTS		

HAZARDS IDENTIFICATION

Emergency Overview

CAUTION! Causes (moderate) eye injury (Irritation). Avoid contact with eyes or clothing.

Potential Health Effects

Based on animal data, skin contact with Oust XP may cause irritation with discomfort or rash.

Based on animal data, eye contact with Oust XP may cause eye irritation with discomfort, tearing, or blurring of vision.

Based on animal data, ingestion of high doses of Sulfometuron Methyl may lead to red blood cell destruction.

Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

FIRST AID MEASURES

First Aid

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

IF INHALED: No specific intervention is indicated as the product is not likely to be hazardous by inhalation. Consult a physician if necessary.

IF ON SKIN OR CLOTHING: No specific intervention is indicated as the product is not likely to be hazardous to skin. Consult a physician if necessary.

IF SWALLOWED: No specific intervention is indicated as compound is not likely to be hazardous by ingestion. Consult a physician if necessary. Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-441-3637 for emergency medical treatment information.

FIRE FIGHTING MEASURES

Flammable Properties

Flammable limits in Air, % by Volume
LEL: 0.092 g/L

Not a fire or explosion hazard.

Like most organic powders or crystals, under severe dusting conditions, this material may form explosive mixtures in air.

Extinguishing Media

Water Spray, Foam, Dry Chemical, CO₂.

Fire Fighting Instructions

Wear self-contained breathing apparatus. Wear full protective equipment. Use water spray. Runoff from fire control may be a pollution hazard.

If area is exposed to fire and conditions permit, let fire burn itself out. Burning chemicals may produce by-products more toxic than the original material. If product is on fire, wear self-contained breathing apparatus and full protective equipment. Use water spray. Control runoff.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Emergency Response - Chemical resistant coveralls, waterproof gloves, waterproof boots and face/eye protection. If dusting occurs, use NIOSH approved respirator protection.

Initial Containment

Dike spill. Prevent material from entering sewers, waterways, or low areas.

Follow applicable Federal, State/Provincial and Local laws/regulations.

Spill Clean Up

Shovel or sweep up.

HANDLING AND STORAGE

Handling (Personnel)

USERS SHOULD: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Avoid breathing vapors or mist. Avoid breathing dust. Avoid contact with eyes, skin, or clothing. Wash thoroughly after handling. Do not store or consume food, drink, or tobacco in areas where they may become contaminated with this material.

Handling (Physical Aspects)

Avoid dust generation. Keep away from heat, sparks and flames.

Storage

Store product in original container only. Do not contaminate water, other pesticides, fertilizer, food or feed in storage.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Use only with adequate ventilation. Keep container tightly closed.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Personal Protective Equipment

Always follow the label instructions when handling this product.

Applicators and other handlers must wear:

Long-sleeved shirt and long pants.

Shoes plus socks.

Follow manufacturer instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

Coveralls.

Chemical resistant gloves, category A (such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber) all equal to or greater than 14 mils.

Shoes plus socks.

Exposure Guidelines

Applicable Exposure Limits

SULFOMETURON METHYL

PEL (OSHA): None Established

TLV (ACGIH): 5 mg/m³, 8 Hr. TWA, A4

AEL* (DuPont): 10 mg/m³, 8 & 12 Hr. TWA total dust

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Solubility in Water: Dispersible

Odor: None

Form: Solid, dry flowable

Color: Off-white

Bulk Density (Loose): 33 lb/cu ft

Bulk Density (Packed): 39 lb/cu ft

STABILITY AND REACTIVITY

Chemical Stability

Stable at normal temperatures and storage conditions.

Incompatibility with Other Materials

None reasonably foreseeable.

Decomposition

Decomposition will not occur.

Polymerization

Polymerization will not occur.

TOXICOLOGICAL INFORMATION

Animal Data

Oust XP

Inhalation 4 hour LC50: > 5.3 mg/L in rats (Very low toxicity by inhalation)

Skin absorption LD50: > 5000 mg/kg in rabbits (Slightly to moderately toxic by contact)

Oral LD50: > 5000 mg/kg in rats (Very low toxicity by ingestion)

Oust XP is a slight to mild skin irritant, and a mild eye irritant, but is not a skin sensitizer in animals.

Single inhalation exposure with Oust XP (Sulfometuron Methyl 75%) in rats caused slight to moderate body weight loss, nasal and ocular discharge, and other nonspecific effects.

Single high oral doses of Oust XP (Sulfometuron Methyl 75%) produced no clinical signs of toxicity and no lesions were observed during pathological examination of tissue.

Repeated oral studies with the active ingredient, Sulfometuron Methyl, caused decreased body weight gain, liver changes, red blood cell hemolysis, and altered white blood cell counts. Long-term exposure caused mild hemolytic anemia, decreased body weight, alteration of clinical chemical parameters, and changes in the bile duct.

Animal testing indicates that the active ingredient, Sulfometuron Methyl, does not have carcinogenic effects. In a two generation rat reproduction study with the active ingredient, Sulfometuron Methyl, decreased numbers of pups were observed at the 5000 ppm level, a dose that was also maternally toxic. No reproductive effects were observed at 500 ppm.

Sulfometuron methyl did not produce developmental toxicity when tested in animals. Sulfometuron methyl did not produce genetic damage in bacterial or mammalian cell cultures.

ECOLOGICAL INFORMATION

Ecotoxicological Information

AQUATIC TOXICITY:

SULFOMETURON METHYL

48 hour NOEC - Daphnia magna: > 150 mg/L.

96 hour LC50 - Rainbow trout: > 148 mg/L.

96 hour LC50 - Bluegill sunfish: > 150 mg/L.

AVIAN TOXICITY:

SULFOMETURON METHYL

Acute Dietary LC50 - Mallard Duck: > 5000 ppm.

Acute Dietary LC50 - Bobwhite Quail: > 5620 ppm

DISPOSAL CONSIDERATIONS

Waste Disposal

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.

Do not contaminate water supply, food or feed by storage or disposal.

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, or areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

Container Disposal

Triple rinse (or equivalent) the container. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

TRANSPORTATION INFORMATION**Shipping Information****DOT/IMO**

Proper Shipping Name: NOT REGULATED

REGULATORY INFORMATION**U.S. Federal Regulations****TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312**

Acute: Yes

Chronic: No

Fire: No

Reactivity: No

Pressure: No

In the United States this product is regulated by the US Environmental Protection Agency under the Federal Insecticide, Fungicide and Rodenticide Act. It is a violation of federal law to use this product in a manner inconsistent with its labeling.

EPA Reg. No. 352-601

OTHER INFORMATION**NFPA, NPCA-HMIS****NFPA Rating**

Health: 1

Flammability: 1

Reactivity: 0

NPCA-HMIS Rating

Health: 1

Flammability: 1

Reactivity: 0

Personal Protection rating to be supplied by user depending on use conditions.

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Responsibility for MSDS: DuPont Crop Protection

Address: Wilmington, DE 19898

Telephone: 1-888-638-7668

Indicates updated section.

This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.

The MSDS format adheres to the standards and regulatory requirements of the United States and may not meet regulatory requirements in other countries.

VID 6.21.05



Material Safety Data Sheet

Payload® Herbicide

This Material Safety Data Sheet (MSDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABELING (attached to and accompanying the product container). This MSDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

Use, storage and disposal of pesticide products is regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling. All necessary and appropriate precautionary, use, and storage, and disposal information is set forth on that labeling. It is a violation of federal law to use a pesticide product in any manner not prescribed on the EPA-approved label.

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Payload® Herbicide
VC NUMBER(S): 1420
ITEM: 88670
SYNONYM(S): None
EPA REGISTRATION NUMBER: 59639-120

MANUFACTURER
VALENT USA CORPORATION
P.O. Box 8025
1600 Riviera Avenue, Suite 200
Walnut Creek, CA 94596-8025

EMERGENCY TELEPHONE NUMBERS
HEALTH EMERGENCY OR SPILL (24 hr):
(800) 892-0099
TRANSPORTATION (24 hr.): CHEMTREC
(800) 424-9300 or (202) 483-7616

PRODUCT INFORMATION
AGRICULTURAL PRODUCTS: (800) 682-5368
PROFESSIONAL PRODUCTS: (800) 898-2536

The current MSDS is available through our website or by calling the product information numbers listed above. (www.valent.com)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Weight/Percent	ACGIH Exposure Limits	OSHA Exposure Limits
Flumioxazin (2-[7-fluoro-3,4-dihydro-3-oxo-4-(2-propynyl)-2H-1,4-benzoxazin-6-yl]-4,5,6,7-tetrahydro-1H-isoindole-1,3(2H)-dione) * (103361-09-7)	51	None	None
Kaolin clay (1332-58-7)	16	2 mg/m ³ TWA (respirable fraction)	15 mg/m ³ TWA 5 mg/m ³ TWA
Others ** (including particulates not otherwise classified) (No CAS#)	32	10 mg/m ³ TWA (inhalable particulate); 3 mg/m ³ TWA (respirable fraction)	15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)

Emergency Telephone: (800) 892-0099
REVISION NUMBER: 4

MSDS NO.: 0228
REVISION DATE: 02/18/2005

* Active Ingredient

** Other ingredients, which are maintained as trade secrets, are any substances other than an active ingredient contained in this product. Some of these may be hazardous, but their identity is withheld because they are considered trade secrets. The hazards associated with the other ingredients are addressed in this document. Specific information on other ingredients for the management of exposures, spills, or safety assessments can be obtained by a treating physician or nurse by calling 1-800-892-0099 at any time.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

- CAUTION**
- Harmful if inhaled or absorbed through skin.
 - Avoid breathing dust or spray mist.
 - Avoid contact with eyes, skin and clothing.
 - Keep out of reach of children.

POTENTIAL HEALTH EFFECTS

Acute Toxicity (Primary Routes of Exposure)

Signs and Symptoms of Systemic Effects: No signs or symptoms occurred in animals exposed to high oral or dermal doses of Flumioxazin Technical. Exposure to very high concentrations of Flumioxazin Technical in the air resulted in breathing difficulties, decreased activity and some changes in the tissues of the respiratory system.

Acute Eye Contact: Based on an evaluation of the ingredients and/or similar products, this product may cause brief and/or minor eye irritation. The expected adverse health effects resulting from an exposure may include redness and possible swelling.

Acute Skin Contact: Based on an evaluation of the ingredients and/or similar products, this product may cause brief and/or minor skin irritation. The expected adverse health effects resulting from an exposure may include redness and possibly some minor swelling. This product may be slightly toxic when absorbed through the skin. This product is not expected to cause allergic skin reactions.

Acute Ingestion: Based on an evaluation of the ingredients and/or similar products, this product may be minimally toxic when ingested.

Acute Inhalation: Based on an evaluation of the ingredients and/or similar products, this product is expected to be slightly toxic when inhaled. Exposure to high concentrations of dust may result in respiratory irritation. Signs and symptoms may include, but not be limited to, nasal discharge, sore throat, coughing and difficulty in breathing.

Chronic Toxicity (including cancer): Repeated exposures to Flumioxazin Technical in animals have produced anemia and other blood formation changes, organ weight changes and changes in blood chemistry. Flumioxazin Technical did not produce cancer in life-time feeding studies in laboratory animals.

Developmental Toxicity (birth defects): Birth defects were produced in the offspring of female rats exposed to Flumioxazin Technical. No effects were observed in rabbits.

Reproductive Toxicity: Reproductive effects were observed in rats exposed to Flumioxazin Technical.

Potentially Aggravated Medical Conditions: Individuals with anemia or preexisting diseases of the blood may have increased susceptibility to the toxicity of excessive exposures.

For complete discussion of the toxicology data from which this evaluation was made, refer to Section 11. For Regulatory Information, refer to Section 15.

4. FIRST AID MEASURES**EMERGENCY NUMBER (800) 892-0099**

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact **1-800-892-0099** for emergency medical treatment information.

EYE CONTACT:

Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

SKIN CONTACT:

Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

INGESTION:

Call a poison control center or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

INHALATION:

Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

NOTES TO PHYSICIAN:

None

5. FIRE FIGHTING MEASURES

FLASH POINT: Not applicable
AUTOIGNITION: No data available
EXTINGUISHING MEDIA: Water fog, carbon dioxide, foam, dry chemical

FLAMMABLE LIMITS IN AIR - LOWER (%): Not applicable
FLAMMABLE LIMITS IN AIR - UPPER (%): Not applicable

NFPA RATING:

Health: 1
Flammability: 1
Reactivity: 0
Special: None

(Least-0, Slight-1, Moderate-2, High-3, Extreme-4). These values are obtained using professional judgement. Values were not available in the guidelines or published evaluations prepared by the National Fire Protection Association, NFPA.

FIRE FIGHTING INSTRUCTIONS: Products of combustion from fires involving this material may be toxic. Avoid breathing smoke and mists. Avoid personnel and equipment contact with fallout and runoff. Minimize the amount of water used for fire fighting. Do not enter any enclosed area without full protective equipment, including self-contained breathing equipment. Contain and isolate runoff and debris for proper disposal. Decontaminate personal protective equipment and fire fighting equipment before reuse. Read the entire document.

HAZARDOUS COMBUSTION PRODUCTS: Normal combustion forms carbon dioxide, water vapor and may produce: Oxides of nitrogen. Combustion may produce toxic: Nitrogen compounds. Fluorine compounds. Incomplete combustion can produce carbon monoxide.

6. ACCIDENTAL RELEASE MEASURES

VALENT EMERGENCY PHONE NUMBER: (800) 892-0099
CHEMTREC EMERGENCY PHONE NUMBER: (800) 424-9300
OBSERVE PRECAUTIONS IN SECTION 8: PERSONAL PROTECTION

Stop the source of the spill if safe to do so. Contain the spill to prevent further contamination of the soil, surface water, or ground water. For additional spill response information refer to the North American Emergency Response Guidebook.

FOR SPILLS ON LAND:

CONTAINMENT: Reduce airborne dust. Avoid runoff into storm sewers or other bodies of water.

CLEANUP: Clean up spill immediately. Vacuum or sweep up material and place in a chemical waste container. Wash area with soap and water. Pick up wash liquid with additional absorbent and place in a chemical waste container.

FOR SPILLS IN WATER:

CONTAINMENT: This material will disperse or dissolve in water. Stop the source of the release. Contain and isolate to prevent further release into soil, surface water and ground water.

CLEANUP: Clean up spill immediately. Absorb spill with inert material. Remove contaminated water for treatment or disposal.

7. HANDLING AND STORAGE

END USER MUST READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL.

Keep pesticide in original container. Do not store or transport near food or feed. Do not contaminate food or feed. Do not put concentrate into food or drink containers. Do not dilute concentrate in food or drink containers. Store in a cool, dry place, out of direct sunlight.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

END USER MUST READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL.

EYES: Do not get this material in your eyes. Eye contact can be avoided by wearing protective eyewear.

RESPIRATORY PROTECTION: Use this material only in well ventilated areas. Unless ventilation is adequate to keep airborne concentrations below recommended exposure standards, approved respiratory protection should be worn.

This material may be a respiratory irritant and, unless ventilation is adequate, the use of approved respiratory protection is recommended. Use this material only in well ventilated areas.

SKIN PROTECTION: Avoid contact with skin or clothing. Skin contact should be minimized by wearing protective clothing including gloves.

EXPOSURE LIMITS - See Section 2.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	Granule
COLOR:	Light brown
ODOR:	Slight
MELTING POINT:	Not applicable
BULK DENSITY:	0.49 g/cc (30.8 lb./cu. ft.)

VAPOR PRESSURE:	Not applicable
pH:	5.4 @ 25°C (1% suspension)
CORROSION CHARACTERISTICS:	Not corrosive to containers.
SOLUBILITY:	Dispersible in water

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY:	This material is considered chemically and thermally stable.
INCOMPATIBILITY:	May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
OXIDATION/REDUCTION PROPERTIES:	Not an oxidizing or reducing agent.
EXPLODABILITY:	Not expected to be explosive.
HAZARDOUS DECOMPOSITION PRODUCTS:	No data available

11. TOXICOLOGICAL INFORMATION

ACUTE (Product Specific Information):

Eye Irritation:	No product specific data available. Based on an evaluation of the ingredients and/or similar products, this product may cause brief and/or minor eye irritation. (Toxicity Category III)
Skin Irritation:	Based on an evaluation of the ingredients and/or similar products, this product may cause brief and/or minor skin irritation. (Toxicity Category IV)
Oral Toxicity:	No product specific data available. The oral LD ₅₀ in rats for a similar product is > 5,000 mg/kg. (Toxicity Category IV)
Dermal Toxicity:	No product specific data available. The dermal LD ₅₀ in rabbits for a similar product is > 2000 mg/kg (Toxicity Category III)
Inhalation Toxicity:	No product specific data available. No rats died in a 4-hour inhalation study with a similar product at the maximum attainable concentration of 0.969 mg/l. (Toxicity Category III) Exposure to very high concentrations in the air resulted in breathing difficulties, decreased activity and some changes in the tissues of the respiratory system.
Skin Sensitization:	Based on an evaluation of the ingredients and/or similar products, this product is not expected to cause allergic skin reactions.

TOXICITY OF FLUMIOXAZIN TECHNICAL

SUBCHRONIC: Compound related effects of Flumioxazin Technical noted in rats following subchronic exposures at high dose levels were hematotoxicity including anemia, and increases in liver, spleen, heart, kidney and thyroid weights. In dogs, the effects produced at high dose levels included a slight prolongation in activated partial thromboplastin time, increased cholesterol and phospholipid, elevated alkaline phosphatase, increased liver weights and histological changes in the liver. The lowest no-observable-effect-level (NOEL) in subchronic studies was 30 ppm in the three-month toxicity study in rats.

CHRONIC/CARCINOGENICITY: In a one year dog feeding study, Flumioxazin Technical produced treatment-related changes in blood chemistry and increased liver weights at 100 and 1000 mg/kg/day. Minimal treatment-related histological changes were noted in the livers of animals in the 1000 mg/kg/day group. Based on these data the NOEL is 10 mg/kg/day. Dietary administration of Flumioxazin Technical for 18 months produced liver changes in mice of the 3000 and 7000 ppm groups. There was no evidence of any treatment-related oncogenic effect. The NOEL for this study is 300 ppm. Dietary administration of Flumioxazin Technical for 24 months produced anemia and chronic nephropathy in rats of the 500 and 1000 ppm groups. The anemia lasted throughout the treatment period, however, it was not progressive nor aplastic in nature. No evidence of an oncogenic effect was observed. The NOEL for this study is 50 ppm.

DEVELOPMENTAL TOXICITY: Flumioxazin Technical produces developmental toxicity in rats in the absence of maternal toxicity at doses of 30 mg/kg/day by the oral route and 300 mg/kg/day by the dermal route. The developmental effects noted consisted primarily of decreased number of live fetuses and fetal weights, cardiovascular abnormalities, wavy ribs and decreased number of ossified sacrococcygeal vertebral bodies. The developmental NOEL in the rat oral and dermal developmental toxicity studies were 10 and 100 mg/kg/day, respectively. The response in rabbits was very different from that in rats. No developmental toxicity was noted in rabbits at doses up to 3000 mg/kg/day, a dose well above the maternal NOEL of 1000 mg/kg/day.

REPRODUCTION: Reproductive toxicity was observed in F1 males, P1 females and F1 females at 300 ppm Flumioxazin Technical, the highest dose tested and a dose that also produced signs of systemic toxicity. Toxicity was also observed in the F1 and F2 offspring at doses of 200 ppm and greater.

MUTAGENICITY: Flumioxazin Technical was not mutagenic in most *in vitro* assays: gene mutation and a chromosome aberration assay in the absence of metabolic activation. In three *in vivo* assays, chromosome aberration, unscheduled DNA synthesis and micronucleus assay, Flumioxazin Technical was not mutagenic. The only positive response was observed in the *in vitro* chromosome aberration assay in the presence of metabolic activation. Overall, Flumioxazin Technical does not present a genetic hazard.

For a summary of the potential for adverse health effects from exposure to this product, refer to Section 3. For information regarding regulations pertaining to this product, refer to Section 15.

12. ECOLOGICAL INFORMATION

AVIAN TOXICITY:

Flumioxazin Technical is practically non-toxic to avian species. The following results were obtained from studies with Flumioxazin Technical:

Oral LD₅₀ bobwhite quail: greater than 2250 mg/kg;
Dietary LC₅₀ bobwhite quail: greater than 5620 ppm;
Dietary LC₅₀ mallard duck: greater than 5620 ppm.

No reproductive effects were observed in bobwhite quail exposed to 500 ppm Flumioxazin Technical in the diet. In mallard ducks, a slight, but not statistically significant reduction in hatchlings and 14-day old survivors was observed. Based on a possible, slight effect on egg production at 500 ppm, the NOEL for this study was 250 ppm.

AQUATIC ORGANISM TOXICITY: Flumioxazin Technical is slightly to moderately toxic to freshwater fish; moderately toxic to freshwater invertebrates; moderately toxic to estuarine/marine fish and moderately to highly toxic estuarine/marine invertebrates, based on the following tests:

- 96-hour LC₅₀ rainbow trout: 2.3 mg/l;
- 96-hour LC₅₀ bluegill sunfish: greater than 21 mg/l;
- 48-hour LC₅₀ Daphnia magna: 5.5 mg/l;
- 96-hour LC₅₀ sheepshead minnow: greater than 4.7 mg/l;
- 96-hour (shell deposition) EC₅₀ eastern oyster: 2.8 mg/l;
- 96-hour LC₅₀ mysid shrimp: 0.23 mg/l;
- Fish early life-stage (rainbow trout): MATC >7.7 µg/l, <16 µg/l;
- Chronic toxicity (mysid shrimp): MATC >15 µg/l, <27 µg/l;
- Chronic toxicity (Daphnia magna): MATC >52 µg/l, <99 µg/l.

OTHER NON-TARGET ORGANISM TOXICITY: Flumioxazin Technical is practically non-toxic to bees. The acute contact LC50 in bees was greater than 105 µg/bee.

13. DISPOSAL CONSIDERATIONS

END USERS MUST DISPOSE OF ANY UNUSED PRODUCT AS PER THE LABEL RECOMMENDATIONS.

DISPOSAL METHODS: Check government regulations and local authorities for approved disposal of this material. Dispose in accordance with applicable laws and regulations.

14. TRANSPORT INFORMATION

DOT (ground) SHIPPING NAME:	Compounds, weed killing, dry, non-regulated
DOT TECHNICAL SHIPPING NAME:	Flumioxazin 51% Solid
DOT REPORTABLE QUANTITY (RQ):	None
UN/NA NUMBER:	Not applicable
HAZARD CLASS:	Not applicable
REMARKS:	None
EXEMPTION REQUIREMENT:	None

15. REGULATORY INFORMATION

REGULATIONS UNDER FIFRA: All pesticides are governed under FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act). Therefore, the regulations presented below are pertinent only when handled outside of the normal use and applications of pesticides. This includes waste streams resulting from manufacturing/formulation facilities, spills or misuse of products, and storage of large quantities of products containing hazardous or extremely hazardous substances.

OTHER U.S. FEDERAL REGULATIONS:

CWA Section 311: No data

Chemical Name	SARA 313 Chemicals	SARA Section 302	CERCLA Reportable Quantity (RQ):
Flumioxazin (2-[7-fluoro-3,4-dihydro-3-oxo-4-(2-propynyl)-2H-1,4-benzoxazin-6-yl]-4,5,6,7-tetrahydro-1H-isoindole-1,3(2H)-dione) * (103361-09-7)	Not listed	Not listed	None
Kaolin clay (1332-58-7)	Not listed	Not listed	None
Others ** (including particulates not otherwise classified) (No CAS#)	Not listed	Not listed	None

SARA (311, 312):

Immediate Health: Yes
 Chronic Health: Yes
 Fire: No
 Sudden Pressure: No
 Reactivity: No

STATE REGULATIONS:

Each state may promulgate standards more stringent than the federal government. This section cannot encompass an inclusive list of all state regulations. Therefore, the user should consult state or local authorities. The state regulations reviewed include: California Proposition 65, California Directors List of Hazardous Substances, Massachusetts Right to Know, Michigan Critical Materials List, New Jersey Right to Know, Pennsylvania Right to Know, Rhode Island Right to Know and the Minnesota Hazardous Substance list. For Washington State Right to Know, see Section 2 for Exposure Limit information. For Louisiana Right to Know refer to SARA information listed under U.S. Regulations above.

Chemical Name	MI - Critical Materials List	MA Right To Know	NJ Right To Know
Kaolin clay (1332-58-7)		Present	

Chemical Name	PA Right To Know	RI Right To Know	MN Hazardous Substance
Kaolin clay (1332-58-7)	Present	Toxic	Present (includes inert or nuisance dust)

California Proposition 65: Not listed

CANADIAN REGULATIONS:

WHMIS Hazard Class: Not determined

For information regarding potential adverse health effects from exposure to this product, refer to Sections 3 and 11.

16. OTHER INFORMATION

REASON FOR ISSUE: Product uses a kaolin clay without silica quartz or titanium dioxide. MSDS updated to exclude these ingredients.
MSDS NO.: 0228
REVISION NUMBER: 4
REVISION DATE: 02/18/2005
SUPERCEDES DATE: 11/13/2003

THE INFORMATION IN THIS MSDS IS BASED ON DATA AVAILABLE TO US AS OF THE REVISION DATE GIVEN HEREIN, AND BELIEVED TO BE CORRECT. CONTACT VALENT USA CORPORATON TO CONFIRM IF YOU HAVE THE MOST CURRENT MSDS.

JUDGEMENTS AS TO THE SUITABILITY OF INFORMATION HEREIN FOR THE INDIVIDUAL'S OWN USE OR PURPOSES ARE NECESSARILY THE INDIVIDUAL'S OWN RESPONSIBILITY. ALTHOUGH REASONABLE CARE

HAS BEEN TAKEN IN THE PREPARATION OF SUCH INFORMATION, VALENT EXTENDS NO WARRANTIES, MAKES NO REPRESENTATIONS, AND ASSUMES NO RESPONSIBILITY AS TO THE ACCURACY OR SUITABILITY OF SUCH INFORMATION FOR APPLICATION TO THE INDIVIDUAL'S PURPOSES OR THE CONSEQUENCES OF ITS USE.



For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident,
Call CHEMTREC Day or Night: 1-800-424-9300.
For Medical Emergencies Only, Call 1-877-325-1840.

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: ProClipse™ 65 WDG
Synonyms: N3, N3-Di-n-propyl-2,4-dinitro-6-(trifluoromethyl)-m-phenylenediamine
 5-dipropylamino- α,α,α -trifluoro-4,6-dinitro-o-toluidine
EPA Reg. No.: 228-434
Company Name: Nufarm Americas Inc.
 1333 Burr Ridge Parkway, Suite 125A
 Burr Ridge, IL 60527
Date of Issue: May 18, 2005 **Supersedes:** New
Sections Revised: New

2. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance and Odor: Odorless yellow granules.

Warning Statements: Keep out of reach of children. CAUTION. Harmful if inhaled or absorbed through the skin. Avoid contact with skin, eyes, or clothing. Avoid breathing dust.

Potential Health Effects:

Likely Routes of Exposure: Skin and eye contact.

Eye Contact: This product is mildly irritating based on toxicity studies.

Skin Contact: This product is practically non-toxic and slightly irritating based on toxicity studies. Allergic skin reactions are possible.

Ingestion: This product is practically non-toxic based on toxicity studies.

Inhalation: This product is practically non-toxic based on toxicity studies.

Medical Conditions Aggravated by Exposure: Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

See Section 11: TOXICOLOGICAL INFORMATION for more information

Potential Environmental Effects:

This product has low solubility in water. At the limit of solubility, this product is not toxic to fish. However, at concentrations substantially above the level of water solubility, it may be toxic to fish.

See Section 12: ECOLOGICAL INFORMATION for more information

3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS NO.	% BY WEIGHT
Prodiamine	29091-21-2	65.0
Other Ingredients		35.0

4. FIRST AID MEASURES

If Swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

If on Skin: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

If in Eyes: Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

If Inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

5. FIRE FIGHTING MEASURES

Flash Point: Not available

Autoignition Temperature: Not applicable

Flammability Limits: Not applicable

Extinguishing Media: Use extinguishing media suitable for surrounding materials. Dry chemical, foam, water spray or fog.

Special Fire Fighting Procedures: Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full fire-fighting turn out gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.

Unusual Fire and Explosion Hazards: If water is used to fight fire, contain runoff, using dikes to prevent contamination of water supplies. Dispose of fire control water later.

Hazardous Decomposition Materials (Under Fire Conditions): Under fire conditions, may produce gases such as hydrogen chloride, nitrogen oxides, and carbon oxides.

National Fire Protection Association (NFPA) Hazard Rating:

Rating for this product: Health: 2 Flammability: 2 Reactivity: 1

Hazards Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.

Environmental Precautions: Prevent material from entering public sewer systems or any waterways. Do not flush to drain. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal.

Methods for Containment: Dike spill using absorbent or impervious materials such as earth, sand or clay. Collect and contain contaminated absorbent and dike material for disposal.

Methods for Clean-Up and Disposal: Wash entire spill area with a detergent slurry, absorb and sweep into container for disposal. See Section 13: DISPOSAL CONSIDERATIONS for more information.

Other Information: Large spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

7. HANDLING AND STORAGE**Handling:**

Avoid contact with skin, eyes, or clothing. Avoid breathing dust. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately, if pesticide gets inside. Then wash thoroughly and put on clean clothing. After handling this product, immediately wash the

outside of gloves before removing the, then remove gloves and all other Personal Protective Equipment. Immediately wash thoroughly and change into clean clothing.

Storage:

Store in original container away from feed or foodstuffs and separated from other pesticides.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:

Where engineering controls are indicated by specific use conditions or a potential for excessive exposure, use local exhaust ventilation at the point of generation.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], then handler PPE requirements may be reduced or modified as specified in the WPS.

Personal Protective Equipment:

Eye/Face Protection: To avoid contact with eyes, wear face shield, goggles or safety glasses. An emergency eyewash should be readily accessible to the work area.

Skin Protection: To avoid contact with skin, wear long pants, long-sleeved shirt, waterproof gloves, and shoes plus socks. An emergency shower should be readily accessible to the work area.

Respiratory Protection: Not normally required. In poorly ventilated area or dusty atmospheres, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.

General Hygiene Considerations: Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material: 1) Do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored. 2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.

Exposure Guidelines:

Component	OSHA		ACGIH		Unit
	TWA	STEL	TWA	STEL	
Prodiamine	NE	NE	NE	NE	

NE = Not Established

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Odorless yellow granules.

Boiling Point:	Not applicable	Specific Gravity:	1.47 @ 25°C (prodiamine)
Density:	Not available	Vapor Density:	Not applicable
Evaporation Rate:	Not applicable	Vapor Pressure:	0.0033 mPa @ 25°C (prodiamine)
Freezing Point:	Not applicable	Viscosity:	Not available
pH:	Not available		
Solubility in Water:	0.013 ppm @ 25°C (prodiamine)		

Note: Physical data are typical values, but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification.

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal use and storage conditions.

Conditions to Avoid: Thermal, mechanical and electrical ignition sources.
Incompatible Materials: Oxidizing agents.
Hazardous Decomposition Products: Can decompose at high temperatures forming toxic gases.
Hazardous Reactions: Hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicological Data:

Data from laboratory studies on this product are summarized below:

Oral: Rat LD₅₀: >5,050 mg/kg; FIFRA Category IV
Dermal: Rabbit LD₅₀: >5,050 mg/kg; FIFRA Category IV
Eye Irritation: Rabbits: Mildly irritating; FIFRA Category III
Skin Irritation: Rabbits: Non-irritating; FIFRA Category IV

Chronic/Subchronic Effects: Liver (alteration and enlargement) and thyroid effects (hormone imbalances) at high does levels (rats); decreased body weight gains.

Reproductive Toxicity: Fetal toxicity at high dose levels (rats); developmental and maternal toxicity observed at 1g/kg/day.

Carcinogenicity: Benign thyroid tumors (rat). None observed (mouse).

Assessment Carcinogenicity:

This product contains substances that are considered to be probable or suspected human carcinogens as follows:

Component	Regulatory Agency Listing As Carcinogen			
	ACGIH	IARC	NTP	OSHA
Prodiamine	No	No	No	No

See Section 2: HAZARDOUS IDENTIFICATION for more information.

12. ECOLOGICAL INFORMATION

This product has low solubility in water. At the limit of solubility, this product is not toxic to fish. However, at concentrations substantially above the level of water solubility, it may be toxic to fish. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Do not contaminate water when disposing of equipment washwater.

Ecotoxicity:

Data on Prodiamine

96-hour LC₅₀ Bluegill Sunfish: 0.55 ppm
 96-hour LC₅₀ Rainbow Trout: 0.83 ppm
 48 hour EC₅₀ Daphnia magna: 0.66 ppm
 Bobwhite Quail 8 day Dietary Oral LD₅₀: >10,000 ppm
 Mallard Duck 8 day Dietary LC₅₀: >10,000 ppm
 Bees LC₅₀/EC₅₀: >100 ug/bee

Environmental Fate:

The information presented here is for the active ingredient, prodiamine. Does not bioaccumulate. Persistent in soil. Stable in water. Immobile in soil. Sinks in water (after 24 hours).

13. DISPOSAL CONSIDERATIONS

Do not contaminate water, food or feed by storage or disposal.

Waste Disposal Method:

Wastes resulting from the use of this product may be disposed of at an approved waste disposal facility.

Container Handling and Disposal:

Paper and plastic film bags or boxes: Completely empty container into application equipment. Then dispose of empty bag or box in a sanitary landfill or incinerate; or, if allowed by state and local authorities, burn locally. Stay out of smoke from burning container.

Fiber drums with plastic liners: Completely empty the plastic liner by shaking and tapping sides and bottom to loosen clinging particles. Pour residues into application equipment. Dispose of empty liner at an incineration facility. Offer the fiber drum for recycling or re-use. If the fiber drum cannot be recycled or re-used, dispose of at an incineration facility.

Plastic containers: Do not reuse product containers. Triplet rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities, by burning.

14. TRANSPORTATION INFORMATION

Follow the precautions indicated in Section 7: HANDLING AND STORAGE of this MSDS.

For Department of Transportation (DOT) regulatory information, if required, consult transportation regulations, product-shipping papers or call Nufarm's DOT Manager at 708-755-2104, Monday through Friday, 8:00 AM to 5:00 PM Central Time.

15. REGULATORY INFORMATION**U.S. Federal Regulations:**

TSCA Inventory: This product is exempted from TSCA because it is solely for FIFRA regulated use.

SARA Hazard Notification/Reporting:

Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370):

Acute, Chronic

Section 313 Toxic Chemical(s): Not applicable

Reportable Quantity (RQ) under U.S. CERCLA: None

RCRA Waste Code: None

State Information:

Other state regulations may apply. Check individual state requirements.

California Proposition 65: Not Listed

16. OTHER INFORMATION

This Material Safety Data Sheet (MSDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-ACCEPTED PRODUCT LABELING (attached to and accompanying the product container). This MSDS provides important health, safety and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities

MATERIAL SAFETY DATA SHEET

ProClipse 65 WDG

generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of federal law to use a pesticide product in any manner not prescribed on the EPA-accepted label.

Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, Nufarm Americas Inc. makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will Nufarm Americas Inc. be responsible for damages of any nature whatsoever resulting from the use or of reliance upon Information. **NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS.**

ProClipse is a trademark of Nufarm Americas Inc.