OPEN HERE

Titus®

A water dispersible granule formulation containing 250 g/kg rimsulfuron, a sulfonylurea.

For the control of certain broad-leaved weeds in potatoes and forage maize.

The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work.

ADAMA

H

MAPP 15050

Titus®
Herbicide containing 250 g/kg rimsulfuron

WARNING

Very toxic to aquatic life with long lasting effects
Avoid release to the environment.
Collect spillage.
Dispose of contents / container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.
Do not contaminate water with the product or its container (Do not clean application equipment near surface water/ Avoid contamination via drains from farmyards and roads).

To avoid risks to human health and the environment, comply with the instructions for use

Approval holder: Du Pont (U.K.) Limited, Crop Protection Products
4th Floor, Kings Court, London Road, Stevenage, Hertfordshire - SG1 2NG
Tel: 01438 734450 or enquiry.agproducts@dupont.com Emergency Tel : 0870 820 0418

Marketing company: Adama Agricultural Solutions UK Ltd,
Unit 15, Thatcham Business Village, Thatcham, Berkshire, RG19 4LW
Tel: 01635 860555 **Technical Help line:** 01635 876622
Email: ukenquiries@adama.com - www.adama.com

National Poisons Information service: 111 (England and Wales) or 08454 24 24 24 (Scotland)

Manufactured in the E.U.

® Registered trademark of E. I. du Pont de Nemours and Company

3 576960 011686

This label is compliant with the CPA Voluntary Initiative Guidance

The Voluntary Initiative
Promoting responsible pesticide use

6225201501

ADAMA AGRICULTURAL SOLUTIONS UK LTD
Unit 15, Thatcham Business Village, Colthrop Way, Thatcham, Berkshire, RG19 4LW
Telephone: (01635) 860555 **Technical Helpline:** (01635) 876622
For advice on medical emergencies, fires or major spills telephone the National Chemical Emergency Centre on 01865 407333
ukenquiries@adama.com
www.adama.com

SHAKE WELL BEFORE USE
PROTECT FROM FROST

120 g e

K-41374/31607 - UK

Batch No.:

CYAN MAGENTA JAUNE NOIR

ADAMA

H

MAPP 15050

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Tel: 01438 734450 or enquiry.qaproducts@dupont.com Emergency Tel : 0870 820 0418

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DIRECTIONS FOR USE

IMPORTANT: This information is approved as part of the Product Label. All instructions within this section must be read carefully in order to obtain safe and successful use of this product.

Restrictions

- TITUS must not be applied to any crop suffering from stress as a result of drought, water-logging, low temperatures, pest or disease attack, nutrient or lime deficiency or other factors reducing crop growth.
- Due to the high level of activity of the herbicide, special care must be taken to avoid damage by drift onto plants outside the target area, or onto surface waters or ditches. Thorough cleansing of equipment is also very important - see below.
- Do not apply to potatoes grown for certified seed.
- Before using TITUS on crops grown for processing, consult processor
- Further cultivation or ridging following application should be avoided.
- Do not apply TITUS to forage maize treated with organophosphate (OP) insecticides.
- Do not apply TITUS on forage maize undersown with grass or clover.

Weed Control

TITUS works mainly by foliar action. When tank-mixed with a suitable adjuvant or herbicide partner, it controls a range of broad-leaved weeds and gives a moderate level of control of Common Couch. It is most effective when applied to small actively growing weeds. Susceptible weeds cease growth almost immediately after application and symptoms can be seen within about ten days. Weed control may be reduced when soil conditions are very dry.

Susceptible Weeds

The susceptibility ratings of weeds in the following tables refer to good spray cover and good growing conditions.

Weed Species	TITUS (50 g/ha) + Citowett* 0.1% v/v	
	Cot - 2 leaf	2-6 leaf
Black-Bindweed	MS	MR
Black Nightshade	MS	R
Charlock*	S	S
Cleavers	S	S
Common Chickweed	S	S
Fat-hen	MR	MR
Hempnettle	S	S
Knotgrass	MS	R
Pale Persicaria	MS	MR
Redshank	S	MS
Red Dead Nettle	S	S
Scentless Mayweed	S	S
Small Nettle	S	S
Volunteer Oilseed Rape*	S	S

S = Susceptible MS = Moderately Susceptible
MR = Moderately Resistant R = Resistant
*A rate of 30 g/ha + Citowett at 0.1% v/v is sufficient to control charlock and volunteer oilseed rape.

When applied for the control of broad-leaved weeds, TITUS will give suppression of Common Couch top growth.

Weed resistance
This product contains rimsulfuron, which is an ALS inhibitor, also classified by the Herbicide Resistance Action Committee as 'Group B'. Use only as part of a resistance management strategy that includes cultural methods of control and does not use ALS inhibitors as the sole chemical method of grass-weed control.

When herbicides with the same mode of action are used repeatedly over several years in the same field, selection of resistant biotypes can take place. These can propagate and may become dominating. A weed species is considered resistant to a herbicide if it survives a correctly applied treatment at the recommended dose. Development of resistance within a weed species can be avoided or delayed by alternating (or tank-mixing) with suitable products having a different mode of action.

Soil

TITUS can be used on all soils and is unaffected by high organic matter.

Weather

Avoid high light intensity (full sunlight) and high temperatures (above 21°C) on the day of spraying. Avoid periods of substantial day to night temperature changes or when frost is expected. Very dry conditions may reduce the effectiveness of the product.

Volume and application

When applying TITUS, care should be taken not to overlap spray swaths.
Apply in 200 litres of water per hectare, using suitable equipment to give good spray cover. The spray quality should be MEDIUM (as defined by BCPC), applied at a pressure of 2 - 3 bar.

Following crops

Only winter wheat should be drilled in the same calendar year as a crop treated with TITUS. Only barley, wheat or maize should be sown in the spring of the year following treatment. In the second autumn following treatment, any crop may be drilled.

Mixing

Before using TITUS, make sure that the spraying equipment is clean and free from contamination with other pesticides.
TITUS mixes easily with water, but the following mixing procedure should be followed: Quarter fill the spray tank with water, start the agitation and add the required quantity of TITUS directly to the tank without prior creaming. Continue agitation while topping up the tank and while spraying. Do not leave the sprayer standing without agitation with chemical in it.

Compatibility

- TITUS is compatible with metribuzin (eg Shotput (M15968)) on potatoes. Metribuzin mixtures should not be applied to metribuzin intolerant varieties (refer to metribuzin label).

- In any tank-mix, add TITUS to the tank first and ensure it is fully dispersed before adding the partner product. Products should only be tank-mixed if each product can be applied within the label recommendations for its use.
- Do not apply TITUS in sequence or in tank-mixture with a product containing any other sulfonylurea.

POTATOES

Crop safety

TITUS may cause transient chlorosis and/or crop stunting from which the crop usually recovers. TITUS must not be used on potatoes grown for seed.

Timing

TITUS must be applied in the spring pre-emergence of the crop up until the crop is 25 cm high.

Dose

Apply TITUS at 50 g product/ha plus Citowett at 0.1% v/v.

FORAGE MAIZE

Crop safety

TITUS can be applied to the following varieties. Please contact your distributor for details on other varieties.

Andrea	Diamante	Facet	Folio	LG2080 (Alarik)
LG2246 (Levis)	Melody	Rival	Sonia	Trophee

TITUS may cause transient chlorosis and/or crop stunting from which the crop usually recovers. Do not apply TITUS to forage maize treated with organophosphate (OP) insecticides.

Timing

TITUS must be applied in the spring post- emergence up to the 4-collar stage of the forage maize.

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Dose

Apply TITUS at 50 g product/ha plus Citowett at 0.1% v/v.

WARNING

EXTREME CARE SHOULD BE TAKEN TO AVOID DAMAGE BY DRIFT ONTO PLANTS OUTSIDE THE TARGET AREA OR ONTO SURFACE WATERS OR DITCHES OR LAND INTENDED FOR CROPPING. SPRAYING EQUIPMENT SHOULD NOT BE DRAINED OR FLUSHED ONTO LAND PLANTED WITH OR INTENDED FOR PLANTING WITH TREES OR CROPS OTHER THAN POTATOES OR FORAGE MAIZE

SPRAY TANK CLEAN-OUT

TO AVOID SUBSEQUENT DAMAGE TO CROPS OTHER THAN POTATOES OR FORAGE MAIZE IMMEDIATELY AFTER SPRAYING TITUS THOROUGHLY CLEAN ALL SPRAY EQUIPMENT INCLUDING INSIDE AND OUTSIDE OF LID USING ALL CLEAR® EXTRA SPRAYER CLEANER ACCORDING TO THE FOLLOWING LABEL INSTRUCTIONS:

1. Immediately after spraying, drain tank completely. Any contamination on the outside of the spraying equipment should be removed by washing with clean water.
2. Rinse inside of tank with clean water and flush through boom and hoses using at least one-tenth of the spray tank volume. Drain tank completely.
3. Half fill tank with clean water and add DuPont ALL CLEAR® EXTRA at the recommended rate. Agitate and then flush the boom and hoses with the cleaning solution. Top up with water making sure the tank is completely full and allow to stand for 15 minutes with agitation. Again flush the boom and hoses and drain tank completely.
4. Nozzles and filters should be removed and cleaned separately with an ALL CLEAR® EXTRA solution containing 50 ml of ALL CLEAR® EXTRA per 10 litres of water.
5. Rinse the tank with clean water and flush through the boom and hoses using at least one-tenth of the spray tank volume. Drain tank completely.
6. Dispose of washings safely follow the 'Code of Practice for Using Plant Protection Products' (DEFRA Publications, 2006). Do not spray onto sensitive crop or land intended for cropping with sensitive crops.

NOTE: If it is not possible to drain the tank completely, step 3 must be repeated before going on to step 4.

NOTICE TO BUYER

All goods supplied by us are of a high grade and we believe them to be suitable for any purpose for which we expressly supply them, but as we cannot exercise control over their mixing or use, all conditions and warranties, statutory or otherwise, as to the quality or fitness for any purpose of our goods are excluded and no responsibility will be accepted by us for any damage or injury whatsoever arising from their storage, handling, application or use.

SAFETY PRECAUTIONS

Operator protection
WASH CONCENTRATE from skin or eyes immediately
DO NOT BREATHE SPRAY
WASH HANDS AND EXPOSED SKIN before meals and after work
Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment:
WEAR SUITABLE PROTECTIVE GLOVES when handling the concentrate.
However, engineering controls may replace personal protective equipment if a COSHH assessment shows that they provide an equal or higher standard of protection.

Environmental Protection
EXTREMELY DANGEROUS TO FISH OR OTHER AQUATIC LIFE. Do not contaminate surface waters or ditches with chemical or used container.
Extreme care must be taken to avoid spray drift onto non-crop plants outside of the target area.

Storage and disposal
KEEP OUT OF REACH OF CHILDREN.
DO NOT RE-USE CONTAINER for any purpose
KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place
EMPTY CONTAINER COMPLETELY and dispose of safely

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Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads).

To avoid risks to human health and the environment, comply with the instructions for use

IMPORTANT INFORMATION

FOR USE ONLY AS A PROFESSIONAL HERBICIDE

Crops:	Potatoes and forage maize
Maximum individual dose:	50 g/ha
Maximum number of applications:	One per crop
Latest time of application:	Potatoes: before most advanced plants are 25 cm high Forage maize: before 4-collar fully emerged stage

Other specific restrictions:
This product may only be applied from 1st February in the year of harvest until the specified latest time of application.
To avoid the build up of resistance do not apply this or any other product containing an ALS inhibitor herbicide with claims for control of grass-weeds more than once to any crop.

READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE. FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTION PRODUCTS.

SAFETY DATA SHEET according to Regulation (EC) No 1907/2006

TITUS®

Version 4.0 (replaces: Version 3.1)
Revision Date 06.02.2014 **Ref. 130000000224**

This Safety Data Sheet adheres to the standards and regulatory requirements of Great Britain and may not meet the regulatory requirements in other countries.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: TITUS®

Synonyms: B10022922
DPX-E9636 25WG

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture: Herbicide

1.3. Details of the supplier of the safety data sheet

Company: Du Pont (U.K.) Limited, Crop Protection Products
4th Floor, Kings Court, London Road, Stevenage
Hertfordshire - SG1 2NG
UNITED KINGDOM

Telephone: +44 (0) 1438 734 450

E-mail address: sds-support@che.dupont.com

1.4. Emergency telephone number

Emergency telephone number: 0870 820 0418

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Acute aquatic toxicity, Category 1 H400: Very toxic to aquatic life.
Chronic aquatic toxicity, Category 1 H410: Very toxic to aquatic life with long lasting effects.

Dangerous for the environment: R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2. Label elements

Warning

H410 Very toxic to aquatic life with long lasting effects.

Special labelling of certain substances and mixtures:
EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

P391 Collect spillage.
P501 Dispose of contents/container to a waste disposal plant.

SP 1 Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads).

2.3. Other hazards

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).
This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

SECTION 3: Composition/information on ingredients

3.1. Substances

not applicable

3.2. Mixtures

Registration number	Classification according Directive 67/548/EEC	Classification according Regulation (EU) 1272/2008 (CLP)	Concentration

Rimsulfuron (CAS-No. 122931-48-0)

	N; R50/53	Aquatic Acute 1; H400 Aquatic Chronic 1; H410	25 %

Alkylnaphthalenesulfonic acid, sodium salt/formaldehyde polycondensate

	Xi;R36/38	Skin Irrit. 2; H315 Eye Irrit. 2; H319	>= 10 - < 15 %

The above products are REACH compliant; Registration number(s) may not be provided because substance(s) are exempted, not yet registered under REACH or are registered under another regulatory process (biocide uses, plant protection products), etc.

For the full text of the R-phrases mentioned in this Section, see Section 16.
For the full text of the H-Statements mentioned in this Section, see Section 16.

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SECTION 4: First aid measures

4.1. Description of first aid measures

General advice: Never give anything by mouth to an unconscious person. For specialist advice physicians should contact the National Poisons Information Service: Tel. 111 for England and Wales and Tel. 08454 24 24 24 for Scotland.

Inhalation: Move to fresh air. Consult a physician after significant exposure. Artificial respiration and/or oxygen may be necessary.

Skin contact: Take off contaminated clothing and shoes immediately. Wash off immediately with soap and plenty of water. In the case of skin irritation or allergic reactions see a physician. Wash contaminated clothing before re-use.

Eye contact: If easy to do, remove contact lens, if worn. Hold eye open and rinse slowly and gently with water for 15-20 minutes. If eye irritation persists, consult a specialist.

Ingestion: Obtain medical attention. DO NOT induce vomiting unless directed to do so by a physician or poison control center. If victim is conscious: Rinse mouth with water.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms: No cases of human intoxication are known and the symptoms of experimental intoxication are not known.

4.3. Indication of any immediate medical attention and special treatment needed

Treatment: Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Water spray, Dry chemical, Foam, Carbon dioxide (CO_2)

Extinguishing media which shall not be used for safety reasons: High volume water jet, (contamination risk)

5.2. Special hazards arising from the substance or mixture

Specific hazards during firefighting: Hazardous decomposition products formed under fire conditions. Carbon dioxide (CO_2) Nitrogen oxides (NOx)

5.3. Advice for firefighters

Special protective equipment for firefighters: Wear full protective clothing and self-contained breathing apparatus.

Further information: Prevent fire extinguishing water from contaminating surface water or the ground water system. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

(on small fires) If area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may increase the area contaminated. Cool containers / tanks with water spray.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Control access to area. Keep people away from and upwind of spill/leak. Avoid dust formation. Avoid breathing dust. Use personal protective equipment. Refer to protective measures listed in sections 7 and 8.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Use appropriate container to avoid environmental contamination. Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained. If the spill area is porous, the contaminated material must be collected for subsequent treatment or disposal. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3. Methods and materials for containment and cleaning up

Methods for cleaning up: Clean-up methods - small spillage Sweep up or vacuum up spillage and collect in suitable container for disposal.
Clean-up methods - large spillage Avoid dust formation. Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13).
If spill area is on ground near valuable plants or trees, remove 5 cm of top soil after initial clean-up.

Other information: Never return spills in original containers for re-use. Dispose of in accordance with local regulations.

6.4. Reference to other sections

For personal protection see section 8., For disposal instructions see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling: Use only according to our recommendations. Use only clean equipment. Avoid contact with skin, eyes and clothing. Do not breathe dust or spray mist. Wear personal protective equipment. For personal protection see section 8. Prepare the working solution as given on the label(s) and/or the user instructions. Use prepared working solution as soon as possible - Do not store. Remove and wash contaminated clothing before re-use. Avoid exceeding of the given occupational exposure limits (see section 8).

Advice on protection against fire and explosion: Keep away from heat and sources of ignition. Avoid dust formation in confined areas. During processing, dust may form explosive mixture in air.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers: Store in a place accessible by authorized persons only. Store in original container. Keep in properly labelled

containers. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs.

Advice on common storage: No special restrictions on storage with other products.

Other data: Stable under recommended storage conditions.

7.3. Specific end use(s)

Plant protection products subject to Regulation (EC) No 1107/2009.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
If sub-section is empty then no values are applicable.

8.2. Exposure controls

Engineering measures: Contains no substances with occupational exposure limit values.

Ensure adequate ventilation, especially in confined areas. Provide for appropriate exhaust ventilation and dust collection at machinery.

Eye protection: Safety glasses with side-shields conforming to EN166

Hand protection: Material: Nitrile rubber
Glove thickness: 0.3 mm
Glove length: Standard glove type.
Protection index: Class 6
Wearing time: > 480 min
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Gloves must be inspected prior to use. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Gauntlets shorter than 35 cm long shall be worn under the combination sleeve. Before removing gloves clean them with soap and water.

Skin and body protection: Manufacturing and processing work: Full protective clothing Type 5 (EN 13982-2)

Mixer and loaders must wear: Full protective clothing Type 5 + 6 (EN ISO 13982-2/ EN 13034) Rubber apron Nitrile rubber boots (EN 13832-3 / EN ISO 20345).

Spray application - outdoor: Tractor / sprayer with hood: No personal body protection normally required.

Tractor / sprayer without hood: Low application (horticulture, field crops): Full protective clothing Type 5 + 6 (EN ISO 13982-2 / EN 13034) Nitrile rubber boots (EN 13832-3 / EN ISO 20345).

Backpack / knapsack sprayer: Low application (horticulture, field crops): Full protective clothing Type 4 (EN 14605) Nitrile rubber boots (EN 13832-3 / EN ISO 20345).

Mechanical automatized spray application in closed tunnel: No personal body protection normally required during the application. However, gloves and a long sleeved shirt shall be worn when handling the treated plants after the application.

To optimize the ergonomy it may be recommended to use cotton underwear when wearing some fabrics. Take advice from supplier. Garment materials that are resistant to both water vapour and air will maximise wearing comfort. Materials should be robust to maintain the integrity and barrier in use. The permeation resistance of the fabric must be verified independently of the « type » protection recommended, to ensure an appropriate performance level of the material adequate to the corresponding agent and type of exposure.

Protective measures: The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. All chemical protective clothing should be visually inspected prior to use. Clothing and gloves should be replaced in case of chemical or physical damage or if contaminated. Only protected handlers may be in the area during application.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Regular cleaning of equipment, work area and clothing. Keep working clothes separately. Contaminated work clothing should not be allowed out of the workplace. Wash hands and face before breaks and immediately after handling the product. When using do not eat, drink or smoke. Keep away from food, drink and animal feedingstuffs. For environmental protection remove and wash all contaminated protective equipment before re-use. Remove clothing/PPE immediately if material gets inside. Wash thoroughly and put on clean clothing. Dispose of rinse water in accordance with local and national regulations.

Respiratory protection: Manufacturing and processing work: Half mask with a particle filter FFP1 (EN149).

Mixer and loaders must wear: Half mask with a particle filter FFP1 (EN149)

Spray application - outdoor: Tractor / sprayer with hood: No personal respiratory protective equipment normally required.

Tractor / sprayer without hood: Low application (horticulture, field crops): Half mask with a particle filter FFP1 (EN149)

Backpack / knapsack sprayer: Low application (horticulture, field crops): Half mask with a particle filter FFP1 (EN149)

Mechanical automatized spray application in closed tunnel: No personal respiratory protective equipment normally required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	:	solid
Colour	:	beige
Odour	:	very faint
Odour Threshold	:	not determined
pH	:	7.0 at 10 g/l (25 °C)
Melting point/range	:	Not available for this mixture.
Boiling point/boiling range	:	not applicable
Flash point	:	not applicable
Flammability (solid, gas)	:	The product is not flammable.
Thermal decomposition	:	Not available for this mixture.
Auto-ignition temperature	:	380 °C
Oxidizing properties	:	The product is not oxidizing.
Explosive properties	:	Not explosive
Lower explosion limit/ lower flammability limit	:	0.15 vol%
Upper explosion limit/ upper flammability limit	:	Not available for this mixture.
Vapour pressure	:	Not available for this mixture.
Bulk density	:	727 kg/m³ , packed
Water solubility	:	dispersible
Partition coefficient: n-octanol/water	:	not applicable
Viscosity, kinematic	:	not applicable
Relative vapour density	:	not applicable
Evaporation rate	:	not applicable

9.2. Other information

Phys.-chem./other information	:	No other data to be specially mentioned.

SECTION 10: Stability and reactivity

10.1. Reactivity: No hazards to be specially mentioned.

10.2. Chemical stability: The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions: No dangerous reaction known under conditions of normal use. Polymerization will not occur. No decomposition if stored and applied as directed.

10.4. Conditions to avoid: Processing temperature : > 100 °C To avoid thermal decomposition, do not overheat. Under severe dusting conditions, this material may form explosive mixtures in air.

10.5. Incompatible materials: No materials to be especially mentioned.

10.6. Hazardous decomposition products: No materials to be especially mentioned.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity
LD50 / rat : > 5,000 mg/kg
Method: OECD Test Guideline 401
Information source: Internal study report (Data on the product itself)

Acute inhalation toxicity
LC50 / 4 h rat : > 7.5 mg/l
Method: OECD Test Guideline 403
Information source: Internal study report (Data on the product itself)

Acute dermal toxicity
LD50 / rabbit : > 2,000 mg/kg
Method: OECD Test Guideline 402
Information source: Internal study report (Data on the product itself)

Skin irritation
rabbit
Result: No skin irritation
Method: OECD Test Guideline 404
Information source: Internal study report (Data on the product itself)

Eye irritation
rabbit
Result: No eye irritation
Method: OECD Test Guideline 405
Information source: Internal study report (Data on the product itself)

Sensitisation
guinea pig Maximisation Test (GPMT)
Result: Animal test did not cause sensitization by skin contact.
Method: OECD Test Guideline 406
Information source: Internal study report (Data on the product itself)

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Repeated dose toxicity
- Rimsulfuron
  The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions.
  Oral -rat
  altered blood chemistry, Liver effects, Organ weight changes.

Mutagenicity assessment
- Rimsulfuron
  Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
  Did not show mutagenic effects in animal experiments.

Carcinogenicity assessment
- Rimsulfuron
  Did not show carcinogenic effects in animal experiments.

Toxicity to reproduction assessment
- Rimsulfuron
  Animal testing did not show any effects on fertility.

Assessment teratogenicity
- Rimsulfuron
  Evidence suggests the substance is not a developmental toxin in animals

STOT - single exposure
The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard
The mixture does not have properties associated with aspiration hazard potential.

SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish
static test / LC50 / 96 h / Oncorhynchus mykiss (rainbow trout): 1,000 mg/l
Method: OECD Test Guideline 203
(Data on the product itself) Information source: Internal study report

Toxicity to aquatic plants
ErC50 / 72 h / Pseudokirchneriella subcapitata: 0.2 mg/l
Method: OECD Test Guideline 201
(Data on the product itself) Information source: Internal study report

EC50 / 14 d / Lemna gibba (duckweed): 0.0315 mg/l
Method: US EPA Test Guideline OPP 122-2 & 123-2
Information source: Internal study report (Data on the product itself)

Toxicity to aquatic invertebrates
static test / EC50 / 48 h / Daphnia magna (Water flea): > 1.000 mg/l
Method: OECD Test Guideline 202
(Data on the product itself) Information source: Internal study report

Toxicity to soil dwelling organisms
LC50 / 14 d / Eisenia fetida (earthworms): > 1,000 mg/kg
Method: OECD Test Guideline 207
(Data on the product itself) Information source: Internal study report

Toxicity to other organisms

LD50 / Colinus virginianus (Bobwhite quail): > 2,250 mg/kg
Method: US EPA Test Guideline OPP 71-1
(Data on the product itself) Information source: Internal study report

LC50 / 8 d / Anas platyrhynchos (Mallard duck): > 5,620 mg/kg
Method: US EPA Test Guideline OPP 71-2
(Data on the product itself) Information source: Internal study report

LD50 / 48 h / Apis mellifera (bees): 0.0411 mg/kg
Method: OECD Test Guideline 213
Oral (Data on the product itself) Information source: Internal study report

LD50 / 48 d / Apis mellifera (bees): 0.0178 mg/kg
Method: OECD Test Guideline 214
Contact (Data on the product itself) Information source: Internal study report

Chronic toxicity to fish
- Rimsulfuron
  NOEC / 90 d / Oncorhynchus mykiss (rainbow trout): 110 mg/l

Chronic toxicity to aquatic Invertebrates
- Rimsulfuron
  NOEC / 21 d / Daphnia magna (Water flea): 0.82 mg/l

12.2. Persistence and degradability

Biodegradability
Not readily biodegradable. Estimation based on data obtained on active ingredient.

12.3. Bioaccumulative potential

Bioaccumulation
Does not bioaccumulate. Estimation based on data obtained on active ingredient.

12.4. Mobility in soil

Mobility in soil
Potentially mobile, but the leaching potential is mitigated by rapid degradation.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). / This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

12.6. Other adverse effects

Additional ecological information

No other ecological effects to be specially mentioned. See product label for additional application instructions relating to environmental precautions.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product: In accordance with local and national regulations. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. Do not contaminate ponds, waterways or ditches with chemical or used container.

Contaminated packaging: Do not re-use empty containers.

SECTION 14: Transport information

ADR

14.1. UN number: 3077
14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Rimsulfuron)
14.3. Transport hazard class(es): 9
14.4. Packing group: III
14.5. Environmental hazards: Environmentally hazardous
14.6. Special precautions for user:
Tunnel restriction code: (E)

IATA_C

14.1. UN number: 3077
14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Rimsulfuron)
14.3. Transport hazard class(es): 9
14.4. Packing group: III
14.5. Environmental hazards : Environmentally hazardous
14.6. Special precautions for user:
DuPont internal recommendations and transport guidance: ICAO / IATA cargo aircraft only

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IMDG

14.1. UN number:	3077
14.2. UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Rimsulfuron)
14.3. Transport hazard class(es):	9
14.4. Packing group:	III
14.5. Environmental hazards :	Marine pollutant
14.6. Special precautions for user:	no data available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Other regulations: The product is classified as dangerous in accordance with Regulation (EC) No. 1272/2008. Take note of Dir 94/33/EC on the protection of young people at work. Take note of Dir 92/85/EEC on the safety and health at work of pregnant workers. Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work. Take note of Directive 96/82/EC on the control of major-accident hazards involving dangerous substances. Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values.

15.2. Chemical Safety Assessment

A Chemical Safety Assessment is not required for this/these products.
The mixture is registered as a plant protection product under Regulation (EC) No. 1107/2009. Refer to the label for exposure assessment information.

SECTION 16: Other information

Text of R-phrases mentioned in Section 3

R36/38	Irritating to eyes and skin.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Full text of H-Statements referred to under section 3.

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Other information: professional use

Abbreviations and acronyms

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute toxicity estimate
CAS-No.	Chemical Abstracts Service number
CLP	Classification, Labelling and Packaging
EbC50	Concentration at which 50% reduction of biomass is observed
EC50	Median effective concentration
EN	European Norm
EPA	Environmental Protection Agency
ErC50	Concentration at which a 50% inhibition of growth rate is observed
EyC50	Concentration at which 50 % inhibition of yield is observed
IATA_C	International Air Transport Association (Cargo)
IBC	International Bulk Chemical Code
ICAO	International Civil Aviation Organization
ISO	International Standard Organization
IMDG	International Maritime Dangerous Goods
LC50	Median Lethal Concentration
LD50	Median Lethal Dose
LOEC	Lowest Observed Effect Concentration
LOEL	Lowest observable effect level
MARPOL	International Convention for the Prevention of Marine Pollution from
Ships n.o.s.	Not Otherwise Specified
NOAEC	No Observed Adverse Effect Concentration
NOAEL	No observed adverse effect level
NOEC	No Observed Effect Concentration
NOEL	No Observed Effect Level
OECD	Organisation for Economic Co-operation and Development
OPPTS	Office of Prevention, Pesticides and Toxic Substances
PBT	Persistent, Bioaccumulative and Toxic
STEL	Short term exposure limit
TWA	time weighted average
vPvB	very Persistent and very Bioaccumulative

Further information

Before use read DuPont's safety information., Take notice of the directions of use on the label.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The above information relates only to the specific material(s) designated herein and may not be valid for such material(s) used in combination with any other materials or in any process or if the material is altered or processed, unless specified in the text.

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