



OPEN HERE

Safety Information
Lorate® SX®

Herbicide

Contains 200 g/kg
metsulfuron-methyl



**Very toxic to aquatic life
with long lasting effects.**

WARNING

Collect spillage.

Dispose of contents / container to a licensed
hazardous-waste disposal contractor or
collection site except for triple rinsed empty
clean containers which can be disposed of
as non-hazardous waste.

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

PCS No: 02689



PCS No: 02689

A soluble granule formulation containing 200 g/kg
metsulfuron-methyl for spring weed control in
wheat, oats, barley, triticale, linseed and green
cover on land temporarily removed from production.

Contents: 60 g e

K-35794/31503 - IRELAND - (COVER) PAGE 1

Du Pont (U.K.) Limited, Crop Protection Products
Wedgwood Way, Stevenage, Herts. SG1 4QN. England
Tel: 00 44 1438 734450 or
enquiry.agproducts@gb.dupont.com

Emergency Tel: (01) 901 4670

National Poisons Centre: (01) 837 9964 and 01 809 2166

Manufactured in EU

FOR PROFESSIONAL USE ONLY

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



K-35794/31503 - IRELAND

Batch N°:



DuPont™ Lorate® SX®

CEREAL HERBICIDE

PCS No: 02689

A soluble granule formulation containing 200 g/kg metsulfuron-methyl for spring weed control in wheat, oats, barley, triticale, linseed and green cover on land temporarily removed from production.

Manufactured in E.U.

Du Pont (U.K.) Limited, Crop Protection Products
Wedgwood Way, Stevenage, Herts. SG1 4QN. England
Tel: 00 44 1438 734450 or enquiry.agproducts@gbr.dupont.com

Emergency Tel: (01) 901 4670

National Poisons Centre: (01) 837 9964 and 01 809 2166

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

SAFETY PRECAUTIONS

ENVIRONMENTAL PROTECTION

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).

FOR USE ONLY AS AN AGRICULTURAL HERBICIDE

Crops: Wheat, oats, barley, triticale, linseed, and land removed from production.

Maximum individual dose: Wheat, oats, barley, triticale, linseed, and land removed from production: 30 g/ha.

Maximum number of treatments: Wheat, oats, barley, triticale and linseed: 1 per crop. One per year for green cover on land temporarily removed from production.

Latest time of application: Wheat, oats, barley and triticale: Before the flag leaf sheath extending stage (GS39) Linseed: before flower buds visible, or up to 30 cm tall, whichever is the sooner. Green cover on land temporarily removed from production: before 1 August in year of application.

Method of application: Tractor mounted sprayer / rotary atomiser.

Other specific restrictions: This product must only be applied from 1 February in the year of harvest until the specified latest timing of application. To protect aquatic organisms respect an unsprayed buffer zone of 5 m to surface water bodies. Direct spray away from water.

DIRECTIONS FOR USE

All instructions within this section must be read carefully in order to obtain safe and successful use of this product.

RESTRICTIONS

- LORATE® alone or in tank-mix, must not be applied to any crop suffering from stress as a result of drought, waterlogging, low temperatures, pest or disease attack, nutrient or lime deficiency or other factors reducing crop growth.
- Do not use LORATE® on cereal crops undersown with grasses, clover or other legumes or any other broad-leaved crop.
- Do not apply LORATE® to any cereal crop in sequence or in tank mixture with a product containing any other sulfonylurea or 'ALS inhibiting' herbicide except:
 - flupyrasulfuron methyl
 - flupyrasulfuron methyl in combination with carfentrazone
 - flupyrasulfuron methyl in combination with thifensulfuron methyl
- LORATE® should not be applied within 7 days of rolling the crop.
- Do not tank-mix LORATE® with chlorpyrifos. Allow at least 14 days between application of LORATE® and chlorpyrifos treatments.

- Contract agents should be consulted before using on crops grown for seed.
- Due to the high level of activity of the herbicide, special care must be taken to avoid damage by drift onto broad-leaved plants outside the target area, or onto ponds, waterways or ditches. Thorough cleansing of important - see below.
- Following Crops - Only cereals, oilseed rape, field beans or grass may be sown in the same calendar year to succeed a cereal crop treated with LORATE®.
- Crop Failure - In the event of crop failure for any reason, sow only wheat within 3 months of the application of LORATE®.

WEED CONTROL

- LORATE®, is a highly active herbicide with foliar and root activity against a wide range of broad-leaved weeds. It is most effective when applied to small actively growing weeds. As larger weeds often become less susceptible, it is important to note the size of each weed species at the time of application.
- Good spray cover of the weeds must be obtained. Weed control may be reduced when soil conditions are very dry. Nevertheless, with adequate soil moisture, susceptible weeds germinating soon after treatment will be controlled.

Weed Resistance

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 sequencing or tank-mixing with suitable products having a different mode of action.

** For the control of Common chickweed, this product must always be applied in a mixture with an alternate mode of action herbicide at recommended rates.

A strategy for preventing and managing resistance should be adopted. Further details and advice on how to implement such a strategy may be obtained from your crop adviser or supplier. The Herbicide Resistance Action Committee (HRAC) also produces guidelines that may be consulted for additional information.

Susceptible Weeds

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

Weed Species	Plants up to 2 expanded true leaves	Plants up to 6 expanded true leaves	Plants up to 15 cm across/high
Black bindweed	MS	MS	--
Charlock	S	S	S
Chickweed, Common**	S	S	S
Cranes-Bill, Dove's Foot	S	S	--
Dead-nettle, Red	S	S	MS
Docks	S	S	S
Fat-hen	S	R	R
Field-speedwell, Common	S	S	MS
Forget-me-not, Field	S	MS	MS
Fool's Parsley	S	S	MS
Hemp-nettle, Common	S	S	S
Knotgrass	S	MS	MS
Mayweeds	S	S	S
Nettle, Small	S	S	--
Pale Persicaria	S	S	S
Pansy, Field	S	MS	MS
Parsley-piert	S	S	S
Poppy, Common	S	S	MS
Redshank	S	S	S
Shepherd's-purse	S	S	S
Sowthistle, Smooth	S	--	--
Volunteer Rape	S	S	--
Volunteer Sugar Beet	S	S	S

S = Susceptible MS = Moderately Susceptible MR = Moderately Resistant R = Resistant

** See Weed resistance paragraph.

SOIL

LORATE® can be used on all soil types.

VOLUME AND APPLICATION

Apply in 100 - 200 litres of water per hectare, using suitable equipment to give good spray cover of the weeds. When crops are thick or weed growth dense, use 400 litres of water per hectare.

When applying LORATE®, care should be taken not to overlap spray swaths.

MIXING

- Before using LORATE®, make sure that the spraying equipment is clean.
- When using LORATE® in a tank-mix, always add LORATE® to the spray tank first.

LORATE® 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 LORATE® directly to the tank without prior creaming. Continue agitation while topping up the tank and while spraying.

COMPATIBILITY

To widen the spectrum of activity and improve the control of some weeds, LORATE® may be tank-mixed with other herbicides. Products should only be tank-mixed if each product can be applied within the label recommendations for its use.

When using LORATE® in a tank-mix, always add LORATE® to the spray tank first.

Do not use any product in a tank-mix if the mixture cannot be applied within the recommendations for all the separate ingredients. Before applying in tank-mix with any other product, consult your supplier.

For further information contact your Du Pont distributor.

CROPS

CEREALS

CROP SAFETY

LORATE® can be used on all winter and spring varieties of wheat, oats, barley and triticale between the growth stages given below.

TIMING

LORATE® must only be applied from 1 February, provided the crop has at least two leaves (wheat, oats, and triticale) or three leaves (barley), until before the flag leaf extending stage.

DOSE

Apply LORATE® at 30 g/ha when used alone or in tank-mix with other herbicides.

FOLLOWING CROPS

Only cereals, oilseed rape, field beans or grass may be sown in the same calendar year to succeed a cereal crop treated with LORATE®.

LINSEED

CROP SAFETY AND TIMING

LORATE® should be applied to actively growing linseed (all varieties) from the growth stage "first pair of true leaves unfolded", up to 30 cm high or before flower buds visible, whichever comes first. Most annual weeds are best controlled by the earliest application possible.

DOSE

Apply LORATE® at 30 g/ha.

FOLLOWING CROPS

Only cereals should be planted within 16 months of applying LORATE® to a linseed crop.

**GREEN COVER ON LAND TEMPORARILY
REMOVED FROM PRODUCTION**

DOSE AND TIMING

LORATE® can be used for broad-leaved weed control in set-aside land within current guidelines and in accordance with the following instructions.

- Apply LORATE® at 30 g/ha in 200 litres of water/ha
- Only one application of a sulfonylurea-containing product must be made per calendar year to set-aside areas.

FOLLOWING CROPS

- Only cereals or grass may be sown in the same calendar year to set-aside land treated with LORATE®.

WARNINGS

EXTREME CARE SHOULD BE TAKEN TO AVOID DAMAGE BY DRIFT ONTO BROAD-LEAVED 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 CEREALS.

POOR CLEANOUT PRACTICES AND INSUFFICIENT WATER VOLUMES USED FOR THE RINSE PROCEDURE MAY RESULT IN INADEQUATE REMOVAL OF PRODUCT DEPOSITS. SUBSEQUENT USE OF APPLICATION EQUIPMENT IN THESE CIRCUMSTANCES MAY RESULT IN DAMAGE TO NON-CEREAL CROPS.

SPRAY TANK CLEAN-OUT

TO AVOID SUBSEQUENT DAMAGE TO CROPS OTHER THAN CEREALS, IMMEDIATELY AFTER SPRAYING LORATE® THOROUGHLY CLEAN ALL SPRAY EQUIPMENT, INCLUDING INSIDE AND OUTSIDE OF LID, USING THE FOLLOWING PROCEDURE:

Always start with a clean tank and spray system. Clean spray equipment thoroughly immediately after use.

1. Thoroughly and completely rinse all interior tank surfaces (including lid) with water (use at least 10% of the tank capacity), taking care to remove any visible deposits. Flush pump, filters and boom after removing in-line strainers, nozzle tips and screens (clean these parts separately). Drain the remainder of the rinsate from the tank.
2. Repeat the rinse, flush and drain.

GENERAL NOTES:

- Consult label tank cleanup procedures for all tank mix partners and be sure to use the most rigorous procedure recommended.

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 DATA SHEET according to Regulation (EC) No 1907/2006 and 453/2010

Version 5.0

Revision Date 08.08.2013

Ref. 130000027902

This Safety Data Sheet adheres to the standards and regulatory requirements of the Republic of Ireland and may not meet the regulatory requirements of other countries.

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

1.1. Product identifier

Product name : LORATE®
 Types : Herbicide
 Synonyms : C11673129
 DPX-T6376 20SX

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 (UK) Limited
 Wedgwood Way
 Stevenage, Herts. SG1 4QN United Kingdom

Telephone : +44 (0) 1438 734 000

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

1.4. Emergency telephone number

Emergency telephone number : +353 (0) 1901 4670

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Acute aquatic toxicity, Category 1
 Chronic aquatic toxicity, Category 1

H400: Very toxic to aquatic life.

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 an approved waste disposal plant.

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

Metsulfuron methyl (CAS-No. 74223-64-6)

	N;R50/53	Aquatic Acute 1; H400 Aquatic Chronic 1; H410	20 %
--	----------	--	------

Sodium carbonate (CAS-No. 497-19-8) (EC-No. 207-838-8)

01-2119485498-19	Xi; R36	Eye Irrit. 2; H319	>= 5 - < 10 %
------------------	---------	--------------------	---------------

Lignosulfonic acid, sodium salt, sulfomethylated (CAS-No. 68512-34-5)

	Xi; R36	Eye Irrit. 2; H319	>= 5 - < 10 %
--	---------	--------------------	---------------

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.

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 contact the National Poisons Information Service. Healthcare Professionals: (01) 809 2566 or (01) 837 9964 (24h per day – 365 days per year). Public Poisons Information Line: (01) 809 2166 (8am-10pm).

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.

: (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 5: Firefighting measures**5.1. Extinguishing media**

Suitable extinguishing media : Water spray, Foam, Dry chemical, Carbon dioxide (CO2)

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 (CO2) 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.

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

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

: Wash hands before breaks and immediately after handling the product.
Remove and wash contaminated clothing before re-use.

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. Provide appropriate exhaust ventilation at places where dust is formed.

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.

Components with workplace control parameters

Type Form of exposure	Control parameters	Update	Basis	Remarks
--------------------------	-----------------------	--------	-------	---------

Sucrose (CAS-No. 57-50-1)

TWA	10 mg/m ³	2010	ELV (IE)	
STEL	20 mg/m ³	2010	ELV (IE)	

Skin and body protection

8.2. Exposure controls**Engineering measures**

: Ensure adequate ventilation, especially in confined areas.
Provide for appropriate exhaust ventilation and dust collection at machinery. Contains no substances with occupational exposure limit values.

Eye protection

: Safety glasses with side-shields conforming to EN166

Hand protection

: Material: Nitrile rubber Glove thickness: 0.3 mm Glove length: Gauntlets Protection index: Class 6
Wearing time: > 480 min
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. The break through time depends amongst other things on the material, the thickness and the type of glove and

therefore has to be measured for each case. The exact break through time can be obtained from the protective glove producer and this has to be observed. 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.

: Manufacturing and processing work: Full protective clothing Type 5 (EN 13982-2) Mixer and loaders must wear: Full protective clothing Type 5 (EN 13982-2) 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 4 (EN 14605) 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. To optimize the ergonomics 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.

	When exceptional circumstances would require an access to the treated area before the end of re-entry periods, wear full protective clothing Type 6 (EN 13034), nitrile rubber gloves class 2 (EN 374) and nitrile rubber boots (EN 13832-3 / EN ISO 20345). Rubber or plastic boots Full protective clothing Type 5 + 6 (EN ISO 13982-2 / EN 13034) Spray application - outdoor:
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. 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. Wash hands before breaks and at the end of workday.
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, granular
Colour	: brown
Odour	: mild
Odour Threshold	: not determined
pH	: 9.2 at 10 g/l
Melting point/range	: Not available for this mixture.
Boiling point/boiling range	: not applicable
Flash point	: not applicable
Flammability (solid, gas)	: Does not sustain combustion.
Thermal decomposition	: Not available for this mixture.
Auto-ignition temperature	: Not available for this mixture.
Oxidizing properties	: The product is not oxidizing.
Explosive properties	: Not explosive

Lower explosion limit/ lower flammability limit	: Not available for this mixture.
Upper explosion limit/ upper flammability limit	: Not available for this mixture.
Vapour pressure	: Not available for this mixture.
Relative density	: Not available for this mixture.
Bulk density	: 660 kg/m ³ , packed
Water solubility	: soluble
Partition coefficient: n- octanol/water	: not applicable
Viscosity, dynamic	: no data available
Relative vapour density	: Not available for this mixture.
Evaporation rate	: Not available for this mixture.

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 : > 140 °C Decomposes on heating. 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 : Sulphur oxides

SECTION 11: Toxicological information**11.1. Information on toxicological effects**

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

Acute inhalation toxicity Metsulfuron methyl
LC50 / 4 h rat : > 5.3 mg/l

Acute dermal toxicity LD50 / rat : > 5,000 mg/kg
Method: OECD Test Guideline 402
(Data on the product itself) Information source: Internal study report

Skin irritation	rabbit Result: No skin irritation Method: OECD Test Guideline 404 (Data on the product itself) Information source: Internal study report	Mutagenicity assessment	Metsulfuron methyl Did not show mutagenic effects in animal experiments. Did not cause genetic damage in cultured bacterial cells. Genetic damage in cultured mammalian cells was observed in some laboratory tests but not in others.
	Eye irritation	rabbit Result: No eye irritation Method: OECD Test Guideline 405 (Data on the product itself) Information source: Internal study report	Carcinogenicity assessment Toxicity to reproduction assessment
Sensitisation		guinea pig Maximisation Test Result: Animal test did not cause sensitization by skin contact. Method: OECD Test Guideline 406 (Data on the product itself) Information source: Internal study report	Assessment teratogenicity
	STOT - single exposure		The substance or mixture is not classified as specific target organ toxicant, single exposure.
Repeated dose toxicity	Metsulfuron methyl Oral rat Exposure time: 90 d Reduced body weight gain, Liver effects	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.
	<hr/> SECTION 12: Ecological information <hr/>		
	12.1. Toxicity		
	Dermal rabbit Skin irritation	Toxicity to fish	static test / LC50 / 96 h / <i>Oncorhynchus mykiss</i> (rainbow trout): > 625 mg/l

Toxicity to aquatic plants	Method: OECD Test Guideline 203 (Data on the product itself) Information source: Internal study report	Chronic toxicity to fish	Metsulfuron methyl NOEC / 21 h / Oncorhynchus mykiss (rainbow trout): 68 mg/l
	ErC50 / 72 h / Pseudokirchneriella subcapitata: > 1.6 mg/l Method: OECD Test Guideline 201 (Data on the product itself) Information source: Internal study report	Chronic toxicity to aquatic Invertebrates	Metsulfuron methyl NOEC / 21 h / Daphnia magna (Water flea): 100 mg/l
Toxicity to aquatic invertebrates	EC50 / 14 d / Lemna gibba (duckweed): 0.00235 mg/l Method: ASTM E 1415-91 (Data on the product itself) Information source: Internal study report	12.2. Persistence and degradability Biodegradability	Not readily biodegradable. Estimation based on data obtained on active ingredient.
	static test / EC50 / 48 h / Daphnia magna (Water flea): > 625 mg/l Method: OECD Test Guideline 202 (Data on the product itself) Information source: Internal study report	12.3. Bioaccumulative potential Bioaccumulation	Does not bioaccumulate. Estimation based on data obtained on active ingredient.
Toxicity to other organisms	LD50 / 48 h / Apis mellifera (bees): 113.7 µg/b Method: OECD Test Guideline 213 Oral (Data on the product itself) Information source: Internal study report	12.4. Mobility in soil Mobility in soil	The product is not expected to be mobile in soils.
	LD50 / 48 h / Apis mellifera (bees): > 100 µg/b Method: OECD Test Guideline 214 Contact (Data on the product itself) Information source: Internal study report	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.

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. (Metsulfuron methyl)
 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. (Metsulfuron methyl)

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

IMDG

14.1. UN number:

3077

14.2. UN proper shipping name:

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Metsulfuron methyl)

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 substance 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
R50/53

Irritating to eyes.

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.

H319
H400
H410

Causes serious eye irritation.

Very toxic to aquatic life.

Very toxic to aquatic life with long lasting effects.

Other information

professional use

Further information

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

™ Trademark of E.I. du Pont de Nemours and Company.

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

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.