



valdor[®]
SOLO

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HERBICIDE

FOR USE ONLY AS AN INDUSTRIAL HERBICIDE

A non-selective residual herbicide for use on natural surfaces not intended to bear vegetation, permeable surfaces overlying soil, hard surfaces (railway ballast only).

A water dispersible granule formulation containing 25% w/w flazasulfuron

PROFESSIONAL USE ONLY - PROTECT FROM FROST

24 hour emergency number: +32 14 58 45 45

Technical enquiries: 01480 403333

Net contents:
4 kg e


The Voluntary Initiative
This label is compliant with the
CPA Voluntary Initiative Guidance



Marketing Company: Bayer CropScience Limited, 230 Cambridge Science Park,
Milton Road, Cambridge, CB4 0WB, Tel: 00 800 1214 9451
www.environmentalscience.bayer.co.uk
for MSDS and larger label

Bayer

Approval holder: ISK Biosciences Europe N.V.
Pegasus Park, De Kleetlaan 12B - B-1831 Diegem
Tel: 0032 2 627 86 11
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IMPORTANT INFORMATION - FOR USE ONLY AS AN INDUSTRIAL HERBICIDE

Crops/situations	Maximum individual dose: (g product/ha)	Maximum total dose: (g product/ha/year)	Maximum number of treatments: (per year)	Latest time of application:
Hard surfaces (railway ballast only), natural surfaces not intended to bear vegetation, permeable surfaces overlying soil.	150	150	1	-

Specific weeds controlled: Broadleaf and grass weeds except those listed
To protect aquatic organisms respect an unsprayed buffer zone of 5m to surface water bodies

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.

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 triple rinsed 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 n°: 06722

IEXXXXXXXX - ARTICLE xxxxxxxx

7-3207-762-085-14/21

Production date / Batch number:
see packaging

Other specific restrictions:

- This product must only be used on natural or porous surfaces such as gravel where the user can establish that the underlying surface is soil, and railway ballast surfaces.
- This product must not be applied to any non-porous man made surfaces.
- 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 per year.

SAFETY PRECAUTIONS

Operator protection

- **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 and when handling contaminated surfaces.
- **WEAR SUITABLE PROTECTIVE CLOTHING** (impermeable coveralls), **SUITABLE PROTECTIVE GLOVES** and **RUBBER BOOTS** when applying by hand-held equipment.
- **WASH ANY CONTAMINATION** from skin or eyes immediately.
- **WASH ALL PROTECTIVE CLOTHING** thoroughly after use, especially the inside of gloves.
- **WASH CONCENTRATE** from skin or eyes immediately.
- **WASH HANDS AND EXPOSED SKIN** before eating, drinking or smoking and after work.
- **WHEN USING DO NOT EAT, DRINK OR SMOKE.**

Environmental protection

- **DO NOT ALLOW DIRECT SPRAY** from train sprayers to fall within 5m of the top of the bank of a static or flowing water body. Do not allow direct overspray of static or flowing surface waters.
- **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).
- Use appropriate containment to avoid environmental contamination.

Storage and disposal

- **KEEP IN ORIGINAL CONTAINER**, tightly closed, in a safe place.
- **EMPTY CONTAINER COMPLETELY** and dispose of safely.
- **KEEP OUT OF REACH OF CHILDREN!**
- **KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS.**
- This material and its container must be disposed of in a safe way.

Resistance

VALDOR SOLO contains nazasulfuron 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 weed control. Strains of some annual weeds (e.g. black-grass, wild oats, and Italian ryegrass) have developed resistance to herbicides which may lead to poor control. A strategy for preventing and managing such resistance should be adopted. This should include integrating herbicides with a programme of cultural control measures. Guidelines have been produced by the Weed Resistance Action Group and copies are available from the HGCA, CPA, your distributor, crop adviser or product manufacturer.

The following measures are part of the resistance management strategy:

- Follow label recommendations
- Adopt complimentary weed control practices
- Use good spraying practice to maintain effective weed control
- Use the correct nozzles to maximise coverage
- Apply under appropriate weather conditions
- Monitor performance and report any unexpected results to your product manufacturer.
- Rotational use with herbicides with differing modes of action.
- For post-emergence weed control VALDOR SOLO must be applied in tank mixture with another herbicide with a different mode of action (e.g. glyphosate).
- Only one application of VALDOR SOLO may be made per year.

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.

SITUATIONS

VALDOR SOLO can be used on natural surfaces not intended to bear vegetation, permeable surfaces overlying soil and hard surfaces (railway ballast only).

SUSCEPTIBILITY OF NON-TARGET SPECIES

Trials have been conducted to evaluate the susceptibility of a large number of trees and shrubs that could be exposed to spray drift particularly during application to parks or amenity shrub beds. Trees and shrubs can be distributed in 3 categories of susceptibility:

Category	Species	Comment
Tolerant to soil and foliar application	Himalayan Birch (<i>Betula utilis</i>)	-
Tolerant to soil application but can be susceptible to foliar application	Horse Chestnut (<i>Aesculus hippocastanum</i>), Silver Birch (<i>Betula verrucosa</i>), Butterfly Bush (<i>Buddleia davidii</i>), Common Box (<i>Buxus sempervirens</i>), Indian Bean (<i>Catalpa bignonioides</i>), Lawson Cypress (<i>Chamaecyparis lawsoniana</i>), Common Hazelnut (<i>Corylus avellana</i>), Orange Cotoneaster (<i>Cotoneaster franchetii</i>), Border Forsythia (<i>Forsythia intermedia</i>), London Plane (<i>Platanus acerifolia</i>), Lombardy poplar (<i>Populus nigra cv.italica</i>), Cherry Laurel (<i>Prunus laurocerasus</i>), Hedge-row Rose (Rosa rugosa), Northern White Cedar (<i>Thuja occidentalis</i>), Western Red Cedar (<i>Thuja plicata</i>), Smallleaved Lime (<i>Tilia cordata</i>), Honeysuckle (<i>Weigelia styriaca</i>)	For these species, foliage must not be exposed to spray drift, particularly during active growth.

Category	Species	Comment
Susceptible to both soil and foliar application	Red-barked Dogwood (<i>Cornus alba</i>), Japanese Privet (<i>Ligustrum japonicum</i>), Chinese Privet (<i>Ligustrum sinense</i>), Common Privet (<i>Ligustrum vulgare</i>), Common Lilac (<i>Syringa vulgaris</i>)	Treatment close to these species is not recommended

When applying near other species, large areas should NOT be treated until a small area has been test sprayed to show the variety to be safe for treatment.

TIMING AND WEATHER

VALDOR SOLO is active on many plant species.

For best results, apply VALDOR SOLO before weeds germinate. If weeds are present, tank mix with a suitable foliar herbicide, when the weeds are small and growing actively.

Avoid post-emergence application to weeds which are naturally senescent, or where growth is impaired by drought, high temperatures, a covering of dust, flooding or frost at or immediately after application, otherwise poor control may result.

It is important, that all weeds are at the correct growth stage when treated, otherwise some re-growth may occur and this will need re-treatment.

Do not apply VALDOR SOLO in windy conditions or using a high pressure which produces a fine spray prone to drifting. DO NOT apply to soils which may later be used to grow crops or plants. Avoid overdosing.

Extreme care must be taken to avoid drift onto desirable plants such as crops, trees or ornamentals.

COMPATIBILITY

VALDOR SOLO may be tank mixed with various glyphosate products registered in Ireland.

DOSE RATE, WATER VOLUME, TIMING OF SPRAYING

Pre-emergence:

Apply 150 g VALDOR SOLO per hectare to control weeds for up to 5 months. Use in 200 to 600 litres water.

Half fill the spray tank with water. Add the recommended quantity of VALDOR SOLO to water. Agitate thoroughly and top up the tank with water. Do not store the spray solution overnight in the spray tank.

Best results will be obtained when VALDOR SOLO is applied in early to late spring before new weeds have germinated.

There are currently no data available on the effectiveness of VALDOR SOLO used pre-emergence on mallows, broad-leaf dock, ragwort, creeping thistle or common nettle.

VALDOR SOLO will not control Fat hen (*Chenopodium album*), Horsetail (*Equisetum arvense*), Black Nightshade (*Solanum nigrum*) or Common Field Speedwell (*Veronica persica*), Smooth hawksbeard (*Crepis capillaris*) and Common sowthistle (*Sonchus oleraceus*, *Sonchus asper*), ribwort plantain (*Plantago lanceolata*), narrow-leaved ragwort (*Senecio inaequidens*) and annual meadow grass (*Poa annua* L.).

Post-emergence:

VALDOR SOLO has limited post-emergence activity. Tank mix with one of the specified tank-mix partners. Applying 150 g VALDOR SOLO per hectare will provide weed control for up to 5 months.

Apply using a water volume of 200 to 600 l/ha. Half fill the spray tank with water. Always add the recommended quantity of VALDOR SOLO to the water first. Agitate thoroughly. Add the recommended quantity of partner herbicide and top up the tank with water maintaining agitation.

Do not store the spray solution overnight in the spray tank.

Use the higher water volume where weed populations are dense. There are currently no data available on the effectiveness of VALDOR SOLO when used in tank-mixture for post emergence control of mallows, broad leaf dock or common couch. There are currently only limited data available on the effectiveness of VALDOR SOLO when used in tank-mixture for post-emergence control of common nettle. VALDOR SOLO in tank mix with a specified tank mix partner will give short-term control only (3-4 months) of Creeping Thistle (*Cirsium arvense*), Smooth Hawks Beard (*Crepis capillaris*), Hairy Rocket (*Erucastrum gallicum*), Smooth Cat's Ear (*Hypochoeris glabra*), Scentless Mayweed (*Matricaria inodora*), Common Ragwort (*Senecio jacobaea*) or Common Dandelion (*Taraxacum officinalis*), Spear Thistle (*Cirsium vulgare*) and Ribwort Plantain (*Plantago lanceolata*).

APPLICATION EQUIPMENT

Apply using a hydraulic sprayer or a Knapsack sprayer, choosing a nozzle type to obtain the stated water volume and giving a MEDIUM spray quality (BCPC definition). Use a spray pattern that enables good coverage of the larger weeds to be achieved. Before spraying it is important to check all hoses, filters and nozzles, and to ensure that the sprayer is clean and correctly set to give an even application at the correct volume.

Maintain agitation during spraying as well as during mixing.

Avoid spray drift onto non-target plants and desired vegetation and areas where plantings are planned as serious damage to these plants may occur.

PROCEDURES FOR CLEANING APPLICATION EQUIPMENT

Application equipment should be cleaned using a diluted ammonia solution as follows:

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 booms and hoses using at least one-tenth of the spray tank volume. Drain tank completely.
3. Depending on the concentration of the ammonia solution the commercial concentrate must be diluted sufficiently to get a 0.25% concentration of ammonia in water and start the cleaning procedure as described. (A commercial concentrate at 1% needs to be diluted by adding water, 3 L of water to each 1 l of ammonia commercial liquid. A commercial concentrate at 6% needs to be diluted 24 times: 1L concentrate at 6% + 23L water). 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. Flush the boom, hoses and drain tank again completely. For disposal of washings, follow the Code of Practice for Using Plant Protection Products.
4. Nozzles and filters should be removed and cleaned separately with ammonia solution at the same concentration as used in the sprayer.
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. For the disposal of washings, follow Code of Practice for Using Plant Protection Products. Do not spray onto sensitive crop or land intended for cropping with sensitive crop.

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

WARRANTY/DAMAGES : ISK Biosciences Europe N.V, as the Seller, shall be under no liability (except for liability for death or personal injury resulting from the negligence of the seller) whether in contract or in tort for or in respect of any loss or damage resulting from arising out of the mixing or sequential use, of the goods with any other goods (whether the Seller or any third-party) otherwise than in accordance with the Seller's Recommendations for Use, or resulting from or arising out of the use of the goods in or before abnormal weather conditions or in unusual soil conditions notwithstanding that such conditions may be known or may have been known to the Seller or on plant varieties not known to the Seller to be abnormally susceptible to damage by the goods.

SAFETY DATA SHEET

Based on Regulation (EC) No 1907/2006, as amended by Regulation (EC) No 453/2010 - Date of revision: 2013-03-07

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:

Product name : FLAZASULFURON 25% WG
Synonyms : EPSILON; KATANA; VALDOR SOLO; SL-160 25% WG;
FLAZASULFURON 25% water dispersible granule
Registration number REACH : Not applicable (mixture)
Product type REACH : Mixture

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

1.2.1 Relevant identified uses : Herbicide

1.2.2 Uses advised against : No uses advised against known

1.3 Details of the supplier of the safety data sheet:

Supplier of the safety data sheet : ISK Biosciences Europe N.V.

Pegasus Park, De Kleetlaan 12B - box 9 B-1831 Diegem, Belgium

Tel: +32 2 627 86 11 - Fax: +32 2 627 86 00 - isk-msds@isk.be

1.4 Emergency telephone number:

24h/24h (Telephone advice: English, French, German, Dutch): +32 14 58 45 45 (BIG)

2. Hazards identification

2.1 Classification of the substance or mixture:

2.1.1 Classification according to Regulation EC No 1272/2008

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

Class : Aquatic Acute

Category : category 1

Hazard statements : H400: Very toxic to aquatic life.

Class : Aquatic Chronic

Category : category 1

Hazard statements : H410: Very toxic to aquatic life with long lasting effects.

2.1.2 Classification according to Directive 67/548/EEC-1999/45/EC

Classified as dangerous in accordance with the criteria of Directives 67/548/EEC and 1999/45/EC N; R50-53 - Very toxic to aquatic organisms.

May cause long-term adverse effects in the aquatic environment.

2.2 Label elements:

Labelling according to Regulation EC No 1272/2008 (CLP)

Signal word : Warning

H-statements : H410 - Very toxic to aquatic life with long lasting effects.

P-statements : P273 - Avoid release to the environment.

P391 - Collect spillage. P501 - Dispose of contents/ container to manufacturer/competent authority.

2.3 Other hazards: CLP - No other hazards known

3. Composition/information on ingredients

3.1 Substances: Not applicable

3.2 Mixtures:

Name (REACH Registration No) : hazaculturon

CAS No / EC No : 104040-8-0

Conc. (C) : 26.6 %

Classification according to DSD/DPD : N; R50-53

Classification according to CLP : Aquatic Acute 1; H400 Aquatic Chronic 1; H410

Note : (1)

Remark : Constituent

Name (REACH Registration No) : methylnaphthensulfonic acid/formaldehyde, copolymer, sodium salt (-)

CAS No / EC No : 81061-51-2

Conc. (C) : 4.9% <= C < 5.6%

Classification according to DSD/DPD : Xi; R41

Classification according to CLP : Eye Dam. 1; H318

Note : (1)

Remark : Constituent



Name (REACH Registration No) : sodium diisopropylnaphtalenesulphonate (-)

CAS No / EC No : 1322-93-6 / 215-343-3

Conc. (C) : C < 5 %

Classification according to DSD/DPD : Xn; R20/22 Xi; R36/37

Classification according to CLP : Acute Tox. 4; H332 Acute Tox. 4; H302 Eye Irrit. 2; H319 STOT SE 3; H335

Note : (1)

Remark : Constituent

(1) For R-phrases and H-statements in full: see heading 16

4. First aid measures

4.1 Description of first aid measures:

General: If you feel unwell, seek medical advice.

After inhalation: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

After skin contact: Rinse with water. Soap may be used. Take victim to a doctor if irritation persists.

After eye contact: Rinse with water. Take victim to an ophthalmologist if irritation persists.

After ingestion: Rinse mouth with water. Do not induce vomiting. Consult a doctor/medical service if you feel unwell.

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

4.2.1 Acute symptoms

After inhalation: Unlikely to cause harmful effects.

After skin contact: Not irritating.

After eye contact: Not irritating.

After ingestion: Unlikely to cause harmful effects.

4.2.2 Delayed symptoms: No effects known.

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

If applicable and available it will be listed below.

5. Firefighting measures

5.1 Extinguishing media:

5.1.1 Suitable extinguishing media:

Polyvalent foam. ABC powder. Carbon dioxide. Water spray.

5.1.2 Unsuitable extinguishing media:

Solid water jet ineffective as extinguishing medium.

5.2 Special hazards arising from the substance or mixture:

On heating/burning: release of toxic and corrosive gases/vapours e.g.: nitrous vapours, hydrofluoric acid, sulphur oxides, carbon monoxide - carbon dioxide.

5.3 Advice for firefighters:

5.3.1 Instructions:

Dilute toxic gases with water spray. Take account of environmentally hazardous firefighting water. Use water moderately and if possible collect or contain it.

5.3.2 Special protective equipment for fire-fighters:

Gloves. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Heat/fire exposure: compressed air/oxygen apparatus.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

6.1.1 Protective equipment for non-emergency personnel : See heading 8.2

6.1.2 Protective equipment for emergency responders Gloves. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Suitable protective clothing : See heading 8.2

6.2 Environmental precautions:

Contain released substance, pump into suitable containers. Plug the leak, cut

off the supply. Dam up the solid spill. Knock down/dilute dust cloud with water spray. Prevent soil and water pollution. Prevent spreading in sewers.

6.3 Methods and material for containment and cleaning up:

Stop dust cloud by covering with sand/earth. Scoop solid spill into closing containers. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

6.4 Reference to other sections: See heading 13.

7. Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

7.1 Precautions for safe handling:

Avoid raising dust. Keep away from naked flames/nat. Observe normal hygiene standards. Keep container tightly closed. Do not discharge the waste into the drain.

7.2 Conditions for safe storage, including any incompatibilities:

7.2.1 Safe storage requirements: Keep only in the original container. Meet the legal requirements.

7.2.2 Keep away from: Heat sources.

7.2.3 Suitable packaging material: No data available

7.2.4 Non suitable packaging material: No data available

7.3 Specific end use(s):

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer. The product will only be used as herbicide.

8. Exposure controls/personal protection

8.1 Control parameters:

8.1.1 Occupational exposure

a) Occupational exposure limit values: If limit values are applicable and available these will be listed below.

b) National biological limit values: If limit values are applicable and available these will be listed below.

8.1.2 Sampling methods : No data available

8.1.3 Applicable limit values when using the substance or mixture as intended : If limit values are applicable and available these will be listed below.

8.1.4 DNEL/PNEC values : If applicable and available it will be listed below.

8.1.5 Control banding : If applicable and available it will be listed below.

8.2 Exposure controls:

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

8.2.1 Appropriate engineering controls

Avoid raising dust. Keep away from naked flames/heat. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

8.2.2 Individual protection measures, such as personal protective equipment : Observe normal hygiene standards. Keep container tightly closed. Do not eat, drink or smoke during work.

a) Respiratory protection: Dust production: dust mask with filter type P1. b)

Hand protection: Gloves. - materials for protective clothing (good resistance) Rubber, PVC, plastics.

c) Eye protection: Safety glasses. In case of dust production: protective goggles.

d) Skin protection: Protective clothing.

8.2.3 Environmental exposure controls:

See headings 6.2, 6.3 and 13

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Physical form	Grains
Odour	Cinnamon odour
Odour threshold	No data available
Colour	Brown
Particle size	No data available
Explosion limits	No data available
Flammability	No data available on direct fire hazard
Log Kow	Not applicable (mixture)
Dynamic viscosity	No data available
Kinematic viscosity	No data available
Melting point	No data available
Boiling point	No data available
Flash point	No data available
Evaporation rate	ether ; No data available
Vapour pressure	No data available
Relative vapour density	No data available
Solubility	No data available
Relative density	0.84
Decomposition temperature	No data available
Auto-ignition temperature	No data available
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
pH	5.1 ; 1 %

Physical hazards : No physical hazard class

9.2 Other information: Absolute density 840 kg/m³

10. Stability and reactivity

10.1 Reactivity: Substance has acid reaction.

10.2 Chemical stability: Stable under normal conditions.

10.3 Possibility of hazardous reactions: No data available.

10.4 Conditions to avoid: Avoid raising dust. Keep away from naked flames/heat.

10.5 Incompatible materials: No data available.

10.6 Hazardous decomposition products: On heating/burning: release of toxic and corrosive gases/vapours e.g. nitrous vapours, hydrofluoric acid, sulphur oxides, carbon monoxide - carbon dioxide.

11. Toxicological information

11.1 Information on toxicological effects:

11.1.1 Test results Acute toxicity

FLAZASULFURON 25% WG

Route of exposure :	Oral
Parameter :	LD50
Method :	-
Value :	4800 mg/kg
Exposure time :	-
Species :	Rat
Gender :	-
Value determination :	Experimental value
Route of exposure :	Dermal
Parameter :	LD50
Method :	-
Value :	> 2000 mg/kg
Exposure time :	-

Species :	Rat
Gender :	-
Value determination :	Experimental value
Route of exposure :	Inhalation
Parameter :	LC50
Method :	-
Value :	> 6.17 mg/l
Exposure time :	4 h
Species :	Rat
Gender :	-
Value determination :	Experimental value
flazasulfuron	
Route of exposure :	Oral
Parameter :	LD50
Method :	-
Value :	> 5000 mg/kg
Exposure time :	-
Species :	Rat
Gender :	-
Value determination :	Experimental value
Route of exposure :	Dermal
Parameter :	LD50
Method :	-
Value :	> 2000 mg/kg
Exposure time :	-
Species :	Rat
Gender :	-
Value determination :	Experimental value

Route of exposure : Inhalation
 Parameter : LC50
 Method : -
 Value : > 5.99 mg/l
 Exposure time : 4 h
 Species : Rat
 Gender : -
 Value determination : Experimental value
Classification of the mixture is based on test data on the mixture as a whole
Conclusion
 Low acute toxicity by the oral route Low acute toxicity by the dermal route.
 Low acute toxicity by the inhalation route.
Corrosion/irritation
 FLAZASULFURON 25% WG
 Route of exposure : Eye
 Result : Not irritating
 Method : -
 Exposure time : -
 Time point : -
 Species : -
 Value determination : Literature study
 Route of exposure : Skin
 Result : Not irritating
 Method : -
 Exposure time : -
 Time point : -
 Species : -
 Value determination : Literature study
Classification of the mixture is based on test data on the mixture as a whole.

Conclusion
 Not classified as irritating to the skin. Not classified as irritating to the eyes.
Respiratory or skin sensitisation
 FLAZASULFURON 25% WG
 No (test) data on the mixture available
 Specific target organ toxicity
 FLAZASULFURON 25% WG
 No (test) data on the mixture available
 Mutagenicity (in vitro)
 FLAZASULFURON 25% WG
 No (test) data on the mixture available
 Mutagenicity (in vivo)
 FLAZASULFURON 25% WG
 No (test) data on the mixture available
 Carcinogenicity
 FLAZASULFURON 25% WG
 No (test) data on the mixture available
 Reproductive toxicity
 FLAZASULFURON 25% WG
 No (test) data on the mixture available
Conclusion CMR
 Not classified for reproductive or developmental toxicity. Not classified for mutagenic or genotoxic toxicity. Not classified for carcinogenicity.
 Toxicity other effects
 FLAZASULFURON 25% WG
 No (test) data on the mixture available. Chronic effects from short and longterm exposure.
 FLAZASULFURON 25% WG

No effects known.
 11.1.2 Other information
 FLAZASULFURON 25% WG
 No (test) data on the mixture available

12. Ecological information

12.1 Toxicity:

FLAZASULFURON 25% WG

Acute toxicity fishes

Parameter : LC50
 Method : -
 Value : > 100 mg/l
 Duration : 96 h
 Species : *Oncorhynchus mykiss*
 Test design : -
 Fresh/salt water : -
 Value determination : Experimental value
 Parameter : LC50
 Method : -
 Value : > 400 mg/l
 Duration : 96 h
 Species : *Lepomis macrochirus*
 Test design : -
 Fresh/salt water : -
 Value determination : Experimental value

Acute toxicity invertebrates

Parameter : EC50
 Method : -
 Value : > 100 mg/l
 Duration : 48 h

Species : *Daphnia magna*
 Test design : -
 Fresh/salt water : -
 Value determination : Experimental value
Toxicity algae and other aquatic plants
 Parameter : EC50
 Method : -
 Value : 0.025 mg/l
 Duration : 72 h
 Species : *Selenastrum capricornutum*
 Test design : -
 Fresh/salt water : -
 Value determination : Experimental value
flazasulfuron
Acute toxicity fishes
 Parameter : LC50
 Method : -
 Value : > 22 mg/l
 Duration : 96 h
 Species : *Oncorhynchus mykiss*
 Test design : Flow-through system
 Fresh/salt water : -
 Value determination : Experimental value
 Parameter : LC50
 Method : -
 Value : > 98 mg/l
 Duration : 96 h
 Species : *Lepomis macrochirus*
 Test design : Flow-through system

Fresh/salt water : -
 Value determination : Experimental value
Acute toxicity invertebrates
 Parameter : EC50
 Method : -
 Value : > 106 mg/l
 Duration : 48 h
 Species : *Daphnia magna*
 Test design : -
 Fresh/salt water : -
 Value determination : Experimental value
Toxicity algae and other aquatic plants
 Parameter : EC50
 Method : -
 Value : 0.045 mg/l
 Duration : 72 h
 Species : *Selenastrum capricornutum*
 Test design : -
 Fresh/salt water : -
 Value determination : Experimental value
 Classification of the mixture is based on test data on the mixture as a whole.
Conclusion
 Slightly harmful to fish. Slightly harmful to invertebrates (Daphnia).
 Highly toxic to algae. May cause long-term adverse effects in the aquatic environment.
12.2 Persistence and degradability:
flazasulfuron
 Half-life soil (t1/2 soil)

Method : -
 Value : 12.8 - 15.9 day(s)
 Primary degradation/mineralisation : -
 Value determination : -
Conclusion
 Contains non readily biodegradable component(s)
12.3 Bioaccumulative potential:
FLAZASULFURON 25% WG
 Log Kow
 Method
 Remark : Not applicable (mixture)
 Value
 Temperature
 Value determination
flazasulfuron
 Log Kow
 Method
 Remark
 Value : < 1.5
 Temperature
 Value determination
methylnaphthalenesulfonic acid/formaldehyde, copolymer, sodium salt
 Log Kow
 Method
 Remark : No data available
 Value
 Temperature
 Value determination

Conclusion

No straightforward conclusion can be drawn based upon the available numerical values.

12.4 Mobility in soil:

FLAZASULFURON 25% WG

(log) Koc

Parameter : -

Method : -

Value : -

Value determination : No data available

flazasulfuron

(log) Koc

Parameter : Koc

Method : -

Value : 46.16

Value determination : Experimental value

Conclusion

No straightforward conclusion can be drawn based upon the available numerical values.

12.5 Results of PBT and vPvB assessment:

Does not contain component(s) that meet(s) the criteria of PBT and/or vPvB as listed in Annex XIII of Regulation (EC) No. 1907/2006.

12.6 Other adverse effects:

FLAZASULFURON 25% WG

Global warming potential (GWP)

None of the known components is included in the list of substances which may contribute to the greenhouse effect (Regulation (EC) No 842/2006)

Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No. 1272/2008 and 1005/2009)

13. Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

13.1 Waste treatment methods:

13.1.1 Provisions relating to waste

Waste material code (Directive 2008/98/EC, decision 2000/0532/EC).

02 01 08* (agrochemical waste containing dangerous substances). Hazardous waste according to Directive 2008/98/EC.

13.1.2 Disposal methods

Remove to an authorized incinerator equipped with an after burner and a flue gas scrubber with energy recovery. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Do not discharge into surface water.

13.1.3 Packaging/Container

Waste material code packaging (Directive 2008/98/EC).

15 01 10* (packaging containing residues of or contaminated by dangerous substances).

14. Transport information

Road (ADR)

14.1 UN number: 3077

14.2 UN proper shipping name:

Proper shipping name : Environmentally hazardous substance, solid, n.o.s.

Techn./chem. name ADR : flazasulfuron

14.3 Transport hazard class(es):

Hazard identification number : 90

Class : 9

Classification code : M7

14.4 Packing group:

Packing group : III

Labels : 9

14.5 Environmental hazards:

Environmentally hazardous substance mark : yes

14.6 Special precautions for user:

Special provisions : 274

Special provisions : 335

Special provisions : 601

Limited quantities : Combination packagings: not more than 5 kg per inner packaging for solids. A package shall not weigh more than 30 kg. (gross mass)

Rail (RID)

14.1 UN number: 3077

14.2 UN proper shipping name:

Proper shipping name : Environmentally hazardous substance, solid, n.o.s.

Techn./chem. name RID : flazasulfuron

14.3 Transport hazard class(es):

Hazard identification number : 90

Class : 9

Classification code : M7

14.4 Packing group:

Packing group : III

Labels : 9

14.5 Environmental hazards:

Environmentally hazardous substance mark : yes

14.6 Special precautions for user:

Special provisions : 274

Special provisions : 335

Special provisions : 601

Limited quantities : Combination packagings: not more than 5 kg per inner packaging for solids. A package shall not weigh more than 30 kg. (gross mass)

Inland waterways (ADN)

14.1 UN number: 3077

14.2 UN proper shipping name:

Proper shipping name : Environmentally hazardous substance, solid, n.o.s.

Techn./chem. name ADN : flazasulfuron

14.3 Transport hazard class(es):

Class : 9

Classification code : M7

14.4 Packing group:

Packing group : III

Labels : 9

14.5 Environmental hazards:

Environmentally hazardous substance mark : yes

14.6 Special precautions for user:

Special provisions : 274

Special provisions : 335

Special provisions : 601

Limited quantities : Combination packagings: not more than 5 kg per inner packaging for solids. A package shall not weigh more than 30 kg. (gross mass)

Sea (IMDG)

14.1 UN number: 3077

14.2 UN proper shipping name:

Proper shipping name : Environmentally hazardous substance, solid, n.o.s.

Techn./chem. name IMO : flazasulfuron

14.3 Transport hazard class(es):

Class : 9

14.4 Packing group:

Packing group : III

Labels : 9

14.5 Environmental hazards:

Marine pollutant : P

Environmentally hazardous substance mark : yes

14.6 Special precautions for user:

Special provisions : 274

Special provisions : 335

Limited quantities : Combination packagings: not more than 5 kg per inner packaging for solids. A package shall not weigh more than 30 kg. (gross mass)

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:

Annex II of MARPOL 73/78 : Not applicable, based on available data

Air (ICAO-TI/IATA-DGR)

14.1 UN number: 3077

14.2 UN proper shipping name:

Proper shipping name : Environmentally hazardous substance, solid, n.o.s.

Techn./chem. name : ICAO flazasulfuron

14.3 Transport hazard class(es):

Class : 9

14.4 Packing group:

Packing group : III

Labels : 9

14.5 Environmental hazards:

Environmentally hazardous substance mark : yes

14.6 Special precautions for user:

Special provisions : A97

Special provisions : A158

Special provisions : A179

Passenger and cargo transport: limited quantities: maximum net quantity per packaging: 30 kg G

15. Regulatory information

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

European legislation:

Volatile organic compounds (VOC) : 0 %

National legislation

- The Netherlands

Waterbezwaarlijkheid : 4

Waste identification (the Netherlands)

LWCA (the Netherlands): KGA category 03

- Germany

WGK : 2 : Classification water polluting based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 4)

15.2 Chemical safety assessment:

No chemical safety assessment has been conducted.

16. Other information

Labelling according to Directive 67/548/EEC-1999/45/EC (DSD/DPD) Labels



Dangerous for the environment

R-phrases

50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

S-phrases

35 This material and its container must be disposed of in a safe way.

57 Use appropriate container to avoid environmental contamination.

Full text of any R-phrases referred to under headings 2 and 3:

R20/22 Harmful by inhalation and if swallowed. R36/37 Irritating to eyes and respiratory system. R41 Risk of serious damage to eyes. R50 Very toxic to aquatic organisms. R53 May cause long-term adverse effects in the aquatic environment.

Full text of any H-statements referred to under headings 2 and 3:

H302 Harmful if swallowed. H318 Causes serious eye damage. H319 Causes serious eye irritation. H332 Harmful if inhaled. H335 May cause respiratory irritation. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects. (*) = INTERNAL CLASSIFICATION BY BIG

PBT-substances = persistent, bioaccumulative and toxic substances

DSD Dangerous Substance Directive

DPD Dangerous Preparation Directive

CLP (EU-GHS) Classification, labelling and packaging (Globally Harmonised System in Europe)

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