

FUSILADE MAX

Version 11- This version replaces all previous versions.

Revision Date 19.11.2014

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name : FUSILADE MAX

Design code : A12791B

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

Use : Herbicide

1.3 Details of the supplier of the safety data sheet

Company Syngenta UK Limited
CPC4, Capital Park
Fulbourn, Cambridge
CB21 5XE

Telephone : (01223) 883400

Telefax : (01223) 882195

Website : www.syngenta.co.uk

1.4 Emergency telephone number

: +44 (0) 1484 538444

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EU) 1272/2008

| | | |
|--------------------------|------------|-------|
| Reproduction toxicity | Category 2 | H361d |
| Acute aquatic toxicity | Category 1 | H400 |
| Chronic aquatic toxicity | Category 2 | H411 |

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

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2.2 Label elements

Labelling: Regulation (EC) No. 1272/2008

Hazard pictograms



Signal Word : Warning

Hazard Statements :H361d Suspected of damaging the unborn child
:H410 Very toxic to aquatic life with long lasting effects

Precautions Statements :P102 Keep out of reach of children
:P201 Obtain special instructions before use
:P280 Wear protective gloves/protective clothing.
:P308/P313 IF exposed or concerned: Get medical advice/
attention.
:P391 Collect spillage
:P501 Dispose of contents/container to a licensed hazardous-
waste disposal contractor or collection site except for
empty clean containers which can be disposed for as
non-hazardous waste.

Supplemental Information :EUH401 Contains fluazifop-P-butyl. May produce an allergic
reaction.
To avoid risks to human health and the environment
comply with the instructions for use.

Hazardous components which must be listed on the label:

- Fluazifop-p-butyl

2.3 Other hazards

None known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous components

| Chemical Name | CAS No. EC No. Registration Number | Classification (REGULATION (EC) No. 1272/2008 | Concentration |
|------------------------------------|--|--|---------------|
| Fluazifop-p-butyl | 79241-46-6 | Skin Sens.1; H317 Repr.2; H361d Aquatic Acute1; H400 Aquatic Chronic1; H410 | 13.4 % w/w |
| (E)-18-ethoxyoctadec-3-ene | 68920-66-1 | Skin Irrit.2; H315 | 20 – 30 %w/w |
| Octan-1-ol | 111-87-5 203-917-6 01-2119486978-10-0005 | Eye Irrit.2; H319 Aquatic Chronic3; H412 | 5 – 15 % w/w |
| Calcium dodecyl benzene sulphonate | 26264-06-2 90194-26-6 | Skin Irrit.2; H315 Eye Dam.1; H318 | 1 – 5 % w/w |

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| | | | |
|---------------------|---|--|-------------|
| | 247-557-8 | | |
| 2-methylpropan-1-ol | 78-83-1 201-148-0 01-2119484609-23-0012 | Flam. Liq.3; H226 STOT SE3; H335 Skin Irrit.2; H315 Eye Dam.1; H318 STOT SE3; H336 | 1 – 5 % w/w |

Substances for which there are Community workplace exposure limits.

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** : Have the product container, label or Material Safety Data Sheet with you when calling the Syngenta emergency number, a poison control center or physician, or going for treatment.
- Inhalation** : Move the victim to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest. Call a physician or poison control centre immediately.
- Skin contact** : Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Wash contaminated clothing before re-use.
- Eye contact** : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.
- Ingestion** : If swallowed, seek medical advice immediately and show this container or label. Do **NOT** induce vomiting: contains petroleum distillates and/or aromatic solvents.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : No information available

4.3 Indication of any immediate medical attention and special treatment needed

Medical advice : There is no specific antidote available. Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

- 5.1 Extinguishing media**
Extinguishing media - small fires
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Extinguishing media - large fires
Use alcohol-resistant foam or water spray.
Do not use a solid water stream as it may scatter and spread fire.
- 5.2 Special hazards arising from the substance or mixture**
As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10). Exposure to decomposition products may be a hazard to health.
- 5.3 Advice for fire-fighters:**
Wear full protective clothing and self-contained breathing apparatus. Do not allow run-off from fire fighting to enter drains or water courses. Cool closed containers exposed to fire with water spray.

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SECTION 6: ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures**
Refer to protective measures listed in sections 7 and 8.
- 6.2 Environmental precautions:**
Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.
- 6.3 Methods and materials for containment and cleaning up**
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). If the product contaminates rivers and lakes or drains inform respective authorities.
- 6.4 Reference to other sections**
Refer to protective measures listed in sections 7 and 8.
Refer to disposal considerations listed in section 13.

SECTION 7: HANDLING AND STORAGE

- 7.1 Precautions for safe handling**
No special protective measures against fire required. Avoid contact with skin and eyes. When using do not eat, drink or smoke. For personal protection see section 8.
- 7.2 Conditions for safe storage, including any incompatibilities**
No special storage conditions required. 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.
- 7.3 Specific end use(s)**
Registered Crop Protection products: For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

| Components | Exposure limit(s) | Type of exposure limit | Source |
|---------------------|--|--|---|
| Fluazifop-p-butyl | 0.5 mg/m ³ | 8 h TWA | SYNGENTA |
| 2-methylpropan-1-ol | 1,600 ppm 50 ppm 100 ppm 50 ppm 100 ppm 50 ppm, 231 mg/m ³ | 8 h TWA 15 min STEL 8 h TWA 8 h TWA 8 h TWA 8 h TWA | NIOSH SUVA SUVA ACGIH DFG UK HSE |

The following recommendations for exposure controls/personal protection are intended for the manufacture, formulation and packaging of the product.

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8.2 Exposure controls

| | |
|---------------------------------|--|
| Engineering measures | : Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated. The extent of these protection measures depends on the actual risks in use. If airborne dust is generated, use local exhaust ventilation controls. Assess exposure and use any additional measures to keep airborne levels below any relevant exposure limit. Where necessary, seek additional occupational hygiene advice. |
| Protective measures | The use of technical measures should always have priority over the use of personal protective equipment. When selecting personal protective equipment, seek appropriate professional advice. Personal protective equipment should be certified to appropriate standards. |
| Respiratory protection | A combination gas, vapour and particulate filter respirator may be necessary until effective technical measures are installed. Protection provided by air-purifying respirators is limited. Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection. |
| Hand protection | Chemical resistant gloves should be used. Gloves should be certified to an appropriate standard. Gloves should have a minimum breakthrough time that is appropriate to the duration of exposure. The breakthrough time of gloves varies according to the thickness, material and manufacturer. Gloves should be changed when breakthrough is suspected. Suitable material: nitrile rubber. |
| Eye protection | Eye protection is not usually required. Follow any site specific eye protection policies. |
| Skin and body protection | Assess the exposure and select chemical resistant clothing based on the potential for contact and the permeation / penetration characteristics of the clothing material. Wash with soap and water after removing protective clothing. Decontaminate clothing before re-use, or use disposable equipment (suits, aprons, sleeves, boots, etc.). Wear as appropriate: impervious protective suit. |

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

| | |
|-------------------------------------|---|
| Physical State | : Liquid |
| Form | : Clear to slightly turbid liquid |
| Colour | : Brown |
| Odour | : Like alcohol, weak |
| Odour Threshold | : No data available |
| pH | : 4 – 8 at 1 % w/v (20 – 25 °C) (as a dispersion) |
| Melting point/range | : No data available |
| Boiling point/boiling range | : No data available |
| Flash point | : 84 °C |
| Evaporation rate | : No data available |
| Flammability (solid, gas) | : No data available |
| Lower explosion limit | : No data available |
| Upper explosion limit | : No data available |
| Vapour pressure | : No data available |
| Relative vapour density | : No data available |
| Density | : 0.936 g/cm ³ at 20 °C |
| Solubility in other solvents | : No data available |
| Partition Coefficient | : No data available |
| n-octanol/water | |
| Autoignition temperature | : 440 °C |

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| | | |
|------------------------------|---|--|
| Thermal decomposition | : | No data available |
| Viscosity, dynamic | : | 51.6 mPa.s at 20 °C 20.6 mPa.s at 40 °C |
| Viscosity, kinematic | : | 22.3 mm ² /s at 40 °C 54.8 mm ² /s at 20 °C |
| Explosive properties | : | Not explosive |
| Oxidizing properties | : | Not oxidising |

9.2 Other information

| | | |
|------------------------|---|--------------------|
| Miscibility | : | Miscible |
| Surface tension | : | 30.8 mN/m at 25 °C |

SECTION 10: STABILITY AND REACTIVITY

| | | |
|--|---|---|
| 10.1 Reactivity | : | No information available |
| 10.2 Chemical Stability | : | No information available |
| 10.3 Possibility of hazardous reactions | : | None known. Hazardous polymerisation does not occur. |
| 10.4 Conditions to avoid | : | No information available |
| 10.5 Incompatible materials | : | No information available |
| 10.6 Hazardous decomposition products | : | Combustion or thermal decomposition will evolve toxic and irritant vapours. |

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 male and female rat, > 2,000 mg/kg |
| Acute inhalational toxicity | : | Acute toxicity estimate, > 5.0 mg/l, 4 h |
| Acute dermal toxicity | : | LD50 male and female rat, > 2,000 mg/kg |
| Skin corrosion/irritation | : | Rabbit: mildly irritating |
| Serious eye damage/eye irritation | : | Rabbit: mildly irritating |
| Respiratory or skin sensitisation | : | Guinea pig: slightly sensitising |
| Germ cell mutagenicity | | |
| fluazifop-p-butyl | : | Did not show mutagenic effects in animal experiments. |
| (E)-18ethoxyoctadec-3-ene octan-1-ol | : | Not mutagenic in Ames Test. |
| 2-methylpropan-1-ol | : | Not mutagenic in Ames Test. |
| 2-methylpropan-1-ol | : | Did not show mutagenic effects in animal experiments. |
| Carcinogenicity | | |
| Carcinogenicity | | |
| fluazifop-p-butyl | : | Did not show carcinogenic effects in animal experiments. |
| 2-methylpropan-1-ol | : | Did not show carcinogenic effects in animal experiments. |
| Teratogenicity | | |
| Fluazifop-p-butyl | : | Did not show teratogenic effects in animal experiments. |
| Reproductive toxicity | | |
| fluazifop-p-butyl | : | Did not show reproductive toxicity effects in animal experiments. |
| octan-1-ol | : | No toxicity to reproduction. |
| 2-methylpropan-1-ol | : | Did not show reproductive toxicity effects in animal experiments. |
| STOT – single exposure | | |
| 2-methylpropan-1-ol | : | May cause drowsiness or dizziness |
| STOT – repeated exposure | | |
| fluazifop-p-butyl | : | No adverse effect has been observed in chronic toxicity tests. |
| 2-methylpropan-1-ol | : | No adverse effect has been observed in chronic toxicity tests. |

SECTION 12: ECOLOGICAL INFORMATION

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12.1 Toxicity

- Toxicity to fish** : LC50 *Oncorhynchus mykiss* (rainbow trout), 20 mg/l, 96 h
Toxicity to aquatic invertebrates : EC50 *Daphnia magna* (water flea), 20 mg/l, 48 h
Toxicity to aquatic plants : EbC50 *Pseudokirchneriella subcapitata* (green algae), 0.184 mg/l, 72 h
 ErC50 *Pseudokirchneriella subcapitata* (green algae), 0.672 mg/l, 72 h

12.2 Persistence and degradability

- Stability in water
 fluazifop-p-butyl : Degradation half- life: 1.5 – 1.7 h. Not persistent in water
 Stability in soil
 fluazifop-p-butyl : Degradation half- life: < 2 d. Not persistent in soil

12.3 Bioaccumulative potential

- Fluazifop-p-butyl : Does not bioaccumulate.

12.4 Mobility in soil

- Fluazifop-p-butyl : Immobile in soil

12.5 Results of PBT and vPvB assessment

- Fluazifop-p-butyl, octan-1-ol : These substances are not considered to be persistent, bioaccumulating nor toxic (PBT).
 These substances are not considered to be very persistent nor very bioaccumulating (vPvB).

12.6 Other adverse effects

- : Classification of the product is based on the summation of the concentrations of classified components.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

- Product** : Do not contaminate ponds, waterways or ditches with chemical or used container. Do not dispose of waste into sewer. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations.
Contaminated packaging : Empty remaining contents. Triple rinse containers. Empty containers should be taken for local recycling or waste disposal. Do not re-use empty containers.

SECTION 14: TRANSPORT INFORMATION

Land transport (ADR/RID)

| | | | |
|------|----------------------------|---|---|
| 14.1 | UN Number | : | UN 3082 |
| 14.2 | UN proper shipping name | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FLUAZIFOP-P-BUTYL) |
| 14.3 | Transport hazard class(es) | : | 9 |
| 14.4 | Packing Group | ; | III |
| | Labels | : | 9 |
| 14.5 | Environmental hazards | : | Environmentally hazardous |

Sea transport (IMDG)

| | | | |
|------|-------------------------|---|---|
| 14.1 | UN Number | : | UN 3082 |
| 14.2 | UN proper shipping name | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FLUAZIFOP-P-BUTYL) |

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| | | | |
|--------|----------------------------|---|------------------|
| 14.3 | Transport hazard class(es) | : | 9 |
| 14.4 | Packing Group | : | III |
| Labels | | : | 9 |
| 14.5 | Environmental hazards | : | Marine Pollutant |

Air transport (IATA-DGR)

| | | | |
|--------|------------------------------|---|---|
| 14.1 | UN Number | : | UN 3082 |
| 14.2 | UN proper shipping name | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FLUAZIFOP-P-BUTYL) |
| 14.3 | Transport hazard class(es) | : | 9 |
| 14.4 | Packing Group | : | III |
| Labels | | : | 9 |
| 14.6 | Special precautions for user | : | none |

14.6 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

GHS-Labeling

Hazard pictograms



Signal Word : Warning

Hazard Statements :H227 Combustible liquid
 :H316 Causes mild irritation
 :H361d Suspected of damaging the unborn child
 :H410 Very toxic to aquatic life with long lasting effects

Precautions Statements :P102 Keep out of reach of children
 :P201 Obtain special instructions before use
 :P280 Wear protective.
 :P308/P313 IF exposed or concerned: Get medical advice/attention.
 :P391 Collect spillage
 :P501 Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed for as non-hazardous waste.

Supplemental Information :EUH401 To avoid risks to human health and the environment comply with the instructions for use.

Hazardous components which must be listed on the label:

- Fluazifop-p-butyl

15.2 Chemical Safety Assessment

A Chemical Safety Assessment is not required for this substance.

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SECTION 16: OTHER INFORMATION

Further information

Approval number, MAPP 11519; PCS No. 01472.

Use plant protection products safely. Always read the label and product information before use.

Based upon SDS release dated 19/11/2014, version 11 with local amendment.

Full text of H-Statements referred to under sections 2 and 3.

| | |
|-------|---|
| H226 | Flammable liquid and vapour |
| H315 | Causes skin irritation |
| H317 | May cause an allergic skin reaction |
| H318 | Causes serious eye damage |
| H319 | Causes serious eye irritation |
| H335 | May cause respiratory irritation |
| H336 | May cause drowsiness or dizziness. |
| H361d | Suspected of damaging the unborn child |
| H400 | Very toxic to aquatic life |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H411 | Toxic to aquatic life with long lasting effects. |
| H412 | Harmful to aquatic life with long lasting effects. |

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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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